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<110> Craig Rosen,
      Steve Ruben
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<150> 60/124,270
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13

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<223> n equals a,t,g, or c
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<222> (2003)
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<213> Homo sapiens

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<221> misc feature
<222> (652)
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PCT/US00/05881

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<213> Homo sapiens
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ccgcagggkt ggagcagctc atgtacatca aggaggactt gatcatccct caccatcaca 840
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cgtgtcctgc ccctgccaca tcagtgactg ctttattctt ttccaataaa gaagtgcacg 1260
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<400> 30
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. 25

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gaatatacta agctgaataa cagctctttg gcctcagaat tttccagtag ccagtawttc 480
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aagggcccgg gaanaccgga ccggtacctg caggcgtacc ngtttcccta tagtgagttg 540
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<222> (328)
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<222> (335)
<223> n equals a,t,g, or c
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<210> 35
<211> 750
<212> DNA
<213> Homo sapiens
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<221> misc feature
<222> (701)
<223> n equals a,t,g, or c
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<221> misc feature
<222> (731)
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<222> (795)
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agageagtat ategeceagt teacetetea gtteeteagt etgeagtgee tgeagetnet 300
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28

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<222> (1298)
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1300

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<223> n equals a,t,g, or c
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<222> (449)
<223> n equals a,t,g, or c
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<222> (403)
<223> n equals a,t,g, or c
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<221> misc feature
<222> (418)
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<222> (33)
<223> n equals a,t,g, or c
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<222> (41)
<223> n equals a,t,g, or c
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34

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37

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39

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<223> n equals a,t,g, or c

WO 00/55173 PCT/US00/05881

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44

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49

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WO 00/55173 PCT/US00/05881

56

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58

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WO 00/55173

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PCT/US00/05881

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1409

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72

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WO 00/55173 PCT/US00/05881

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PCT/US00/05881

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PCT/US00/05881

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PCT/US00/05881

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<213> Homo sapiens
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<222> (30)
<223> n equals a,t,g, or c
<220>
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<222> (913)
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<222> (1993)
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<222> (2002)
<223> n equals a,t,g, or c
<400> 103
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<212> DNA
<213> Homo sapiens
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1094
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<211> 2297
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (30)
<223> n equals a,t,g, or c
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<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (423)
<223> n equals a,t,g, or c
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gacaatagat gctgtaccaa atgcatacct gggagaacag acatkgattg gaaatatatg 360
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<211> 1019
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<222> (995)
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<210> 108
<211> 711
<212> DNA
<213> Homo sapiens
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<221> misc feature
<222> (642)
<223> n equals a,t,g, or c
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<211> 743
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<213> Homo sapiens
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<211> 795
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<221> misc feature
<222> (645)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (737)
<223> n equals a,t,g, or c
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<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (1)
<223> n equals a,t,g, or c
<220>
<221> misc feature
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<212> DNA

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<223> n equals a,t,g, or c
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<222> (1241)
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<221> misc feature
<222> (1300)
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<210> 112
<211> 743
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<223> n equals a,t,g, or c
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<222> (272)
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<222> (590)
<223> n equals a,t,g, or c
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<222> (618)
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90

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<211> 583
<212> DNA
<213> Homo sapiens
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<210> 125
<211> 1987
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
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PCT/US00/05881

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<222> (7)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (14)
<223> n equals a,t,g, or c
<220>
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<222> (517)
<223> n equals a,t,g, or c
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<221> misc feature
<222> (1960)
<223> n equals a,t,g, or c
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<213> Homo sapiens
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aaaaaaaaa a
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<210> 127
<211> 1234
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (857)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (1204)
<223> n equals a,t,g, or c
<220>
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<221> misc feature
<222> (1226)
<223> n equals a,t,g, or c
<400> 127
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geoeggeeag ceatggntge caccagettt atecteatga etaettteee gaacaaagag 900
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<210> 128
<211> 863
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (840)
<223> n equals a,t,g, or c
<400> 128
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cgtggtattc agggacatct cgcccgtcct gaaggacccc gcctccttcc gcgccgccat 180
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<212> DNA
<213> Homo sapiens
<400> 129
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<210> 130
<211> 379
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (373)
<223> n equals a,t,q, or c
<400> 130
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<210> 131

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<211> 1786
<212> DNA
<213> Homo sapiens
<400> 131
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<210> 132
<211> 974
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (165)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (853)
<223> n equals a,t,q, or c
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<221> misc feature
<222> (963)
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<212> DNA
<213> Homo sapiens
<400> 133
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gegetteeeg caceteeegg egetgetget acaeeggege egecageate tgeeagageg 600
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<210> 134
<211> 1855
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (1818)
<223> n equals a,t,g, or c
```

101

<220>

<221> misc feature

```
<222> (1845)
<223> n equals a,t,g, or c
<400> 134
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112

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WO 00/55173 PCT/US00/05881

114

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PCT/US00/05881

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WO 00/55173 PCT/US00/05881

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<221> misc feature
<222> (394)
<223> n equals a,t,g, or c
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126

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<212> DNA
<213> Homo sapiens
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<221> misc feature
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<223> n equals a,t,g, or c
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<211> 1026
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<212> DNA

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<221> misc feature
<222> (733)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (754)
<223> n equals a,t,g, or c
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gagatgtgag ggcctttgtc tcatcacatc cgagcacagc tcagcaagat gctcttagct 120
agraaacaga ttttatgtgt taatgttaaa aattttgcag ttatttatct tgtggatatt 180
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128

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WO 00/55173

129

PCT/US00/05881

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<210> 173
<211> 656
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<213> Homo sapiens
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<213> Homo sapiens
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131

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<221> misc feature
<222> (3329)
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<213> Homo sapiens
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<211> 1738
<212> DNA
<213> Homo sapiens
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<222> (1480)
<223> n equals a,t,g, or c
<400> 189
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<221> misc feature
<222> (1875)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (1910)
<223> n equals a,t,g, or c
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<223> n equals a,t,g, or c
<220>
<221> misc feature
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<221> misc feature
<222> (535)
<223> n equals a,t,q, or c
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<221> misc feature
<222> (559)
<223> n equals a,t,g, or c
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gagactggat ctgttcaaac agcaaacgcc cacagatggc ccagaggtgg tggtagtcag 180
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qccqccatqt tcctqatatt agttctgatt tctttttaac aaatgttatc atgattaaga 420
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147

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<221> misc feature
<222> (590)
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aaaaccggca catgcggtta ctgtgggctc cagttcagac agcaccacca ctagagcgtg 420
tggcacgccg ggggtcccgc agcatcctgt gagcatttcc gcggggaagc tgagcacgtg 480
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<212> DNA
<213> Homo sapiens
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<221> misc feature
<222> (579)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (618)
<223> n equals a,t,g, or c
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<221> misc feature
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148

PCT/US00/05881

WO 00/55173

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<221> misc feature
<222> (672)
<223> n equals a,t,g, or c
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atattqaqtc aggattqact aatgaactqt agaggttttg cattatgcaa atgctcttaa 240
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ccttttatta taagaagatt agtaatattc tacagataat aacaacaact ggtatagtat 360
attttattta cattcttcat tcttaggaga aaatgctgag aagcttctgc agttcaagcg 420
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ttggacwtca agcccatcac tgccagccag tgaagaagga ttccagccta tgccctcaat 540
cacaatawga ccaccagatg accmacatct tectactgna aaataettgc atttettgga 600
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<212> DNA
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<223> n equals a,t,g, or c
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aaaagtttgg ccaaaaccaa ccatgaagct gcaaaggtgc ttgctcttac tstttcaaat 180
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ttttgcaact ctartgtctc acttttaaag gaacagcttg attgcaaagg agaaaataga 240

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gagaaatcaa atgctaagag ttgttgaagc agaaggcggc tgattgttgg taagtcagtg 480
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<223> n equals a,t,g, or c
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<222> (492)
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<222> (495)
<223> n equals a,t,g, or c
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<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (2282)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (2302)
<223> n equals a,t,g, or c
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<223> n equals a,t,g, or c

WO 00/55173 PCT/US00/05881

153

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1147
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<221> misc feature
<222> (684)
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acggaagggc gggtaggacg gagtttcgtc atgttggcca ggcccatttg agatctttga 180
agatateete aaegtgagge tetgetgeea tgaaggtgaa gattaagtge tggaaeggeg 240
tggccacttg gctctgggtg gccaacgatg agaactgtgg catctgcagg atggcattta 300
acggatgctg ccctgactgc aaggtgcccg gcgacgactg cccgctggtg tggggccagt 360
gctcccactg cttccacatg cattgcatcc tcaagtggct gcacgcacag caggtgcagc 420
agcactgccc catgtgccgc caggaatgga agttcaagga gtgaggcccg acctggntct 480
cgctggaggg gcatcctgag actccttcct catgctggcg ccgatggctg ctggggacag 540
cgcccctgag ctgcaacaag gtggaaacaa gggctggagc tgcgtttgtt ttgccatcac 600
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<212> DNA
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<221> misc feature
<222> (287)
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gcaaaactgg aagaattgtc tggctattat ctaagctgtt cataagctgg aacaagtaga 180
tctgagggta agaggagttc tgttttaact aggactgagt ttcaaataga gatgtttcag 240
actatagagg gggaaaaatg gcckgggang tccataaatc taagccngtt tcatggatgt 300
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<211> 417
<212> DNA
<213> Homo sapiens
<220>
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<222> (380)
<223> n equals a,t,g, or c
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cagteegegt ecacagacte tgacgaagac gtggatetge tetegettta getgetegeg 240
gtcctccaga tcatgtccgc gactcctgcg actccgcgcg gaaaaaaaag tttgccaggc 300
qtqqactcaa tqacytttcc aastqtqcqc ctcqytqcct ggaccqgttt gagcgcggtt 360
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<222> (471)
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<221> misc feature
<222> (484)
<223> n equals a,t,g, or c
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<221> misc feature
<222> (519)
<223> n equals a,t,g, or c
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gtctgagaca gacatccctg aagcggaggc tctgtcaaat caatactgcg tcgcacttrg 180
tccgttgagg aagccacacc tggggtacaa aagaagcttc tacgtttacc cgctgtacca 240
cggatttctt tcccctttgc tcttaccaat tttaccaggt gaaaacaccg cacagaggct 300
teceteggaa tgaegetegg gtetggagtt gggttagaat tgtgggeeeg egtgaeeece 360
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gcggggccac gcagggatgc tgttcccaan tcacgganta tctggtgggc ntcgcaatgg 480
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<210> 206
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<221> misc feature
<222> (479)
<223> n equals a,t,g, or c
<400> 206
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ggtccccgcg cgccccgggt cggaggcaga cccctgggtt tgggggacat gggcatttgg 120
ggcgcctgaa cccaagacct ctggatgagc tgccccgttc agaccatgga tcctgaggtg 180
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gagaccegge taaaggeeca accetggete ttegaegeec ccaagtteeg cetgeactea 360
gccaccetgg egectattgg eteteggggg ccacagetge teetgegeet gggeettaet 420
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cacgagteta caggaatett etttgtggag acacagaacg tgcggagatt gcccgagacg 960
gagatgtggg ctgaactctg cccctcgcca aaggcgccat catcctctac aaccgggttc 1020
agggaagtcc cactggagcg gccctagggt ccccagccct actcccgccg ctctgaaaat 1080
                                                                   1101
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<210> 207
<211> 515
<212> DNA
<213> Homo sapiens
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<222> (428)
<223> n equals a,t,g, or c
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<222> (439)
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<222> (449)
<223> n equals a,t,g, or c
<220>
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<222> (456)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (474)
<223> n equals a,t,g, or c
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acactgcgag aatacaaggt ggtggggcgc tgcctgccca cccccaaatg tcgcactccg 120
ccgctgtatc gcatgcgaat ctttgcacct aatcacgtgg tcgccaagtc ccgcttttgg 180
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<211> 269
<212> DNA
<213> Homo sapiens
<400> 208
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aatctggaca tcattttccc tttcagagca tagaatgcag ggggatccag ggaatgggtt 180
aacagaagag gaagctggwt caaggagacc tttgcgtacc aggtgaaggt gtttgaactt 240
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<211> 734
<212> DNA
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<223> n equals a,t,g, or c
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<221> misc feature
<222> (732)
<223> n equals a,t,g, or c
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159

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<210> 210
<211> 658
<212> DNA
<213> Homo sapiens
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<221> misc feature
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<223> n equals a,t,q, or c
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<221> misc feature
<222> (567)
<223> n equals a,t,g, or c
<220>
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<222> (577)
<223> n equals a,t,g, or c
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<223> n equals a,t,g, or c
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<221> misc feature
<222> (636)
<223> n equals a,t,g, or c
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<221> misc feature
<222> (654)
<223> n equals a,t,g, or c
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<400> 210

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gtcgqtgccq atggcgcaaa ctcgatggtg cggcgacatc tctacccgga tcatcaaatc 180
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gggtgctgtt tecetegege tggcaggatt ttgtctgegg taaggacaac geetttettg 480
attggtgaac ggcgggattt atcagcgcca gctcgctgga agggattagc tatgcgctgg 540
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<222> (91)
<223> n equals a,t,g, or c
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<221> misc feature
<222> (94)
<223> n equals a,t,g, or c
<400> 211
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aagactgaat tgtaagaaaa atctccagcc cttctgtctg cagcttgaga cttgaaccag 180
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<210> 212
<211> 1271
<212> DNA
<213> Homo sapiens
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<221> misc feature
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<400> 212
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cgtggaaaaa tacgagaaac agatcaagca ctttggcatg cttcgccgct gggatgacag 180
ccaaaagtac ctgtcagaca acgtccacct ggtgtgcgag gagacagcca attacctggt 240
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ccagacaatc gtcatgcaat ttatcctgga gctggccaag agcctaaagg tggacccccg 360
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cctggacccc gtcgaggtct acgagtccct ccctgaggaa ctccagaagt gcttcgatgt 600
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<222> (1019)
<223> n equals a,t,g, or c
<400> 213
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ctggtggagg agcgcctggc cggagcaacc ctcctcatct ttgctaataa gcaggacctg 480
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gcccccacc tagcagtcca ggtccctcaa ccttcaccaa acactaccca tggggggttg 720
ggagtcagcc ggccaaacta acacteeccc tectecacce cageetgetg etgetactge 780
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ccgga
<210> 214
<211> 351
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (332)
<223> n equals a,t,g, or c
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ttagcagaag gaaggaaata gtaaatatta cagcagaagt aaagtagagg ctagaaaaat 120
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163

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164

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168

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<222> (542)
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<220>
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<222> (562)
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<222> (514)
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aaggacacgg tocaggcaaa gaccagtgtt agctgtggag atatgcgagt tacgtggttg 420
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<213> Homo sapiens
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<212> DNA
<213> Homo sapiens
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catggagaaa ctccgggcac agtgcctgtc ccgcggggcc tcgggcatcc agggcctggc 180
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174

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<223> n equals a,t,g, or c
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<221> misc feature
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<220>
<221> misc feature
<222> (31)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (34)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (591)
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177

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178

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181

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WO 00/55173 PCT/US00/05881

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 aaaaaaagat ccttcaaagg gcagatgggt agaaggcata acctctgagg gttaccatta 180
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aacagtgage egagattgca ecacegeact ecageetgga taacaaagta agacteegte 720
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PCT/US00/05881

WO 00/55173

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193

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PCT/US00/05881

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<220>

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201

PCT/US00/05881

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PCT/US00/05881

203

WO 00/55173

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<213> Homo sapiens
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act
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<211> 1846
<212> DNA
<213> Homo sapiens
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207

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<220>
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<211> 880
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<213> Homo sapiens
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<210> 271
<211> 2484
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (194)
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<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (623)
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<220>
<221> misc feature
<222> (2396)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (2484)
<223> n equals a,t,g, or c
<400> 271
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<400> 272
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<213> Homo sapiens
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<222> (3279)
<223> n equals a,t,g, or c
<400> 273
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211

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216

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220

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225

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234

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235

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WO 00/55173

247

PCT/US00/05881

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PCT/US00/05881

WO 00/55173

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250

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PCT/US00/05881

251

WO 00/55173

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252

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PCT/US00/05881

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<212> DNA
<213> Homo sapiens
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<221> misc feature
<222> (244)
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WQ 00/55173

263

PCT/US00/05881

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<222> (551)
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<223> n equals a,t,g, or c

264

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ttagttgcac tagccatatt tcaaatactt gatggataca tgtggctagt ggctaacata 180
agggatagca cagatataaa acatttcctc ccaaagtgct gggattacag gcatgagcca 240
ccqcqccqq cctatcatat qaattttqaq qgaacacaat catqcagtct gtagcagatq 300
gtaataggct gatatattac acttgttgat gtaanctgga tangtttctt tcttctccaa 360
ggacagcttt ttnaatattt aacantnoca ttaatttttc agtttccggg agaattttat 420
aatttaaaat tgccgactta ngganaancc aattggncca accattacaa tanattttta 480
attccgntta aaaaatccca ccngnggggg aattccgctt aaaattttat tttccattat 540
tcccaatggc ntnaattta
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<211> 467
<212> DNA
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<222> (145)

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<222> (393)
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tgtcagtcag tgcgtgaagc caccaccgcc tccggtggna tgaatgcagc ctccccccga 120
ctggncagac accgntgnaa cgggnattat ttcaccctca gagagaggct gatcactatg 180
caaaaacaac tgggaggaaa cccagaagta tattgaatga gcagtgcaga ttagagttgc 240
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ccatatcgat gggcancaat tgncaattat tgtgnagcaa tacacacggg gtttccangg 300
gagtnttaaa tgccttaaag taattaaaan ccggggcaat nccnttttac ggatgttttg 360
ctggggtttc cgtttttaac caacattttt ntnggggncc gnccacaaat tttggggttg 420
gnattggncg ttttttcttn ntggccccat ttnccngnaa acggggg
<210> 331
<211> 418
<212> DNA
<213> Homo sapiens
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<222> (257)
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<221> misc feature
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<222> (380)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (387)
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cttcctttcc tgtagggaat ctcacgtaaa atgaaatctt ccctcccca aggtgtccgc 120
aatgtngcca ntgtctgtct gcagattggc tacccaactg ttgcatcagt accccattct 180
atcatcaacg ggtacnaacg antcctggcc ttgtctgtgg agacggatta caccttccca 240
cttgctgaan aagtcanggc ttcttggctg atccatctgc cttngtggct gctgcccngt 300
tggctgctgc caccacact gctcctgctg ctgctgcncc ccancttaag ttnaaaccca 360
agaaaatccg aagatccgan aaagatntgg attgggtctc tttgactaat caccaaaa 418
<210> 332
<211> 486
<212> DNA
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<222> (9)
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<221> misc feature
<222> (446)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (478)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (485)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (486)
<223> n equals a,t,g, or c
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acgggacent gggaceggeg tegggggteg eggggaceat geageggane teeetgeeet 60
tegetateet gaegetggtg aaegeeegt acaagegagg attttactge ggggatgaet 120
ccatccggta cccctaccgt ccagatacca tcacccacgg gctcatggct ggggtcacca 180
teaeggeeae egteateett gteteggeeg gggaageeta eetggtgtae acagaeegge 240
totattotog otoggactto aacaactacg tggotgctgt atacaaggtg ctggggactt 300
cctgtttggg gctgccgtga gccagtctct gacagacctg gccaagtaca tgattgggcg 360
tctgaagccc aattctaanc gtctgcgaac ccgattgaac cggtcaatgc tcgtnatgtg 420
cagtggagaa gtttgcaggg aacctnttga ttcacgagca gtgtttttaa tcggaatntc 480
                                                                   486
tttgnn
<210> 333
<211> 268
<212> DNA
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  <222> (36)
  <223> n equals a,t,g, or c
  <220>
  <221> misc feature
  <222> (69)
  <223> n equals a,t,g, or c
  <220>
  <221> misc feature
  <222> (78)
  <223> n equals a,t,g, or c
  <220>
  <221> misc feature
  <222> (87)
  <223> n equals a,t,g, or c
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  <222> (105)
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 <222> (260)
<223> n equals a,t,g, or c
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<222> (263)
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<222> (264)
<223> n equals a,t,g, or c
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ttcaactana agtatcanaa tatagcnttc cagaaaaccc cgaancanag tcactgacta 120
catcaaagtc tactacacct tgagaaaaca aatgaacgan aatctatttt cctcattcat 180
taccccaaca ataataggac tccctatcgt aattattntc actatgtttc caagcattga 240
tatncccatc acctacccgn ctnntcaa
<210> 334
<211> 517
<212> DNA
<213> Homo sapiens
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<222> (214)
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<220>
<221> misc feature
<222> (259)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (302)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (332)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (360)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (410)
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<222> (436)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (447)
<223> n equals a,t,g, or c
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<221> misc feature
<222> (463)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (489)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (496)
<223> n equals a,t,g, or c
<400> 334
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taactggcta gaagtgccca acgtggaatg tttcttttt aaaggcggct cttgaagcga 120
cccggaagcg gaagtggaag aaagttctag tggcttgaga ttaagcctga tcaagatgac 180
aacctcccaa aagcaccgag acttcgtggc agancccatg ggggagaacc agtggggaac 240
ctggctggga ttggtgaant cctgggcaag aaactggaag aaagggtttt gacaaggcta 300
tnttgtcttg gccatttctg gtgctaaaaa anataaaaac tctcccggaa tggtgaaaan 360
ctttttgggc cacccaacat cccgaatgtc cgatgctcca aaatgtgcan cctcttttat 420
qtctttqqaa tctctncccc cccccnatt tgaccaattg ganccccctt cctcaagaaa 480
atgttgttnc ccccanttcc ggttttgatt tccccac
                                                                   517
<210> 335
<211> 297
<212> DNA
<213> Homo sapiens
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<221> misc feature
<222> (19)
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<221> misc feature
<222> (155)
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WO 00/55173

273

PCT/US00/05881

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<222> (156)
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<223> n equals a,t,g, or c
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<221> misc feature
<222> (245)
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<223> n equals a,t,g, or c

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<222> (246)
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<222> (252)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (265)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (267)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (286)
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ggccgctcta gaactagtgg ggggcccggt acccaattcg ccctatagtg agtcgtatta 120
caattcactg geogtegttt tacaacgteg tgacnnggaa aacntnnaat netteegget 180
cgtatgttgt gtggaattgt nagcggataa caattcacac aggnancagc tataaccatg 240
attnnnccaa gntcgaaatt aaccntnact aaaggggaca aaagtngggg ctccacg
<210> 336
<211> 386
<212> DNA
<213> Homo sapiens
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<222> (50)
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<221> misc feature
<222> (128)
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<221> misc feature
<222> (148)
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<223> n equals a,t,g, or c <220> <221> misc feature <222> (185) <223> n equals a,t,g, or c <220> <221> misc feature <222> (187) <223> n equals a,t,g, or c <220> <221> misc feature <222> (200) <223> n equals a,t,g, or c<220> <221> misc feature <222> (204) <223> n equals a,t,g, or c <220> <221> misc feature <222> (244) <223> n equals a,t,g, or c <220> <221> misc feature <222> (251) <223> n equals a,t,g, or c<220> <221> misc feature <222> (261) <223> n equals a,t,g, or c <220> <221> misc feature <222> (265) <223> n equals a,t,g, or c <220> <221> misc feature <222> (272) <223> n equals a,t,g, or c <220> <221> misc feature <222> (275) <223> n equals a,t,g, or c

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<222> (286)
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<222> (315)
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<221> misc feature
<222> (328)
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<222> (337)
<223> n equals a,t,g, or c
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<221> misc feature
<222> (344)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (346)
<223> n equals a,t,g, or c
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<220>
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<222> (359)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (363)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (365)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (380)
<223> n equals a,t,g, or c
<400> 336
gatgggcagc gactacatcc gtgaggtgaa tgtggtgaag tctgcccgtn tcggttattc 60
caaaatgctg ctgggtgttt atgcctactt tatagagcat aagcagcgca acacccttat 120
ctggttgncg acggatggtg atgcccgnga actttatgaa aaacccacgt tgagcccgac 180
tattngngat attccgtcgn tgcntggggc tggccccgtg gtatggcaaa aaagcaccgg 240
gttnaacaag ntcaaccatg naagngtttc anctnaatgg gggggncccc gtaacccaat 300
tngncctata agtnnatggg antttaanaa ttcaatnggc cctngntttt aaatggtgng 360
tgntnggcct tttttttttn gtttgt
                                                                   386
<210> 337
<211> 506
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (13)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (307)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (340)
<223> n equals a,t,g, or c
<220>
<221> misc feature
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278

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<222> (360)
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<220>
<221> misc feature
<222> (404)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (412)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (414)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (437)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (439)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (469)
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<220>
<221> misc feature
<222> (470)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (471)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (472)
<223> n equals a,t,g, or c
<220>
<221> misc feature
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<222> (481)

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  <221> misc feature
  <222> (483)
  <223> n equals a,t,g, or c
  <220>
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  <222> (501)
  <223> n equals a,t,g, or c
  <400> 337
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  caccactatg taccctggca ttgccgaccg aatgcagaag gagatcacgg ccctagcacc 120
  cagcaccatg aagatcaaga tcattgcccc tccggaggcg caaatactct gtctggatcg 180
  gtggctccat cctggcctct ctgtccacct tccagcagat gtggatcagc aaacagggaa 240
  tacggtgaag ccgggccttc cattgtccac cgcaaatgct ttcttaaaac acttttcctg 300
  gttcctnttc tgtcttttag gcacacaact gtggaatgtn cctgtgggaa tttatggccn 360
  tttcagtttc tttttccaaa tcattcctag ggccaaagtt ttgnattggt tnanccatgg 420
  ggttttttta aataaantnt ggaaataggg ttaattggtt aaaaaaaann nnaaaaaaaa 480
  ntntggggg gggggcccg ntaccc
                                                                     506
  <210> 338
  <211> 623
  <212> DNA
  <213> Homo sapiens
· <220>
  <221> misc feature
  <222> (441)
  <223> n equals a,t,g, or c
  <220>
  <221> misc feature
  <222> (508)
  <223> n equals a,t,g, or c
  <220>
  <221> misc feature
  <222> (509)
  <223> n equals a,t,g, or c
  <220>
  <221> misc feature
  <222> (513)
  <223> n equals a,t,g, or c
 <220>
 <221> misc feature
 <222> (537)
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<220>
<221> misc feature
<222> (565)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (597)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (599)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (612)
<223> n equals a,t,g, or c
<400> 338
geggaacttg ctactaceag caccatgeec taccaatate cageactgae eeeggageag 60
aagaaggagc tgtctgacat cgctcaccgc atcgtggcac ctggcaaggg catcctggct 120
gcagatgagt ccactgggag cattgccaag cggctgcagt ccattggcac cgagaacacc 180
gaggagaacc ggcgcttcta ccgccagctg ctgctgacag ctgacgaccg cgtgaacccc 240
tgcattgggg gtgtcatcct cttccatgag acactctacc agaaggcgga tgatgggcgt 300
cccttccccc aagttatcaa atccaaggc ggtgttgtgg gcatcaaggt agacaagggc 360
gtggtccccc tggcagggac aaatggcgag actaccaccc aagggttgga tgggctgtct 420
gagcgctgtg cccagtacaa ngaaggacgg agctgacttc ggccaagtgg cgttgtgtgc 480
ttaagaatgg gggaacacac cccctcannc ctnggcatca tggaaaatgc caattgntct 540
ggccccgtat gccagtatct ggcancagaa tgcattgggc cattcgggga gtctgananc 600
tcctgatggg ancatgactt gaa
<210> 339
<211> 344
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (88)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (157)
<223> n equals a,t,g, or c
<220>
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<221> misc feature
<222> (171)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (210)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (298)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (317)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (330)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (343)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (344)
<223> n equals a,t,g, or c
<400> 339
togaccoacg cgtccgcttc aacatgattt gtcacaatct tatcaataat cattactctg 60
ttttttatat ttcaactaaa agtatcanaa tatagctttc cagaaaaccc cgaaccaaag 120
tcactgacta catcaaagtc tactacacct tggaganaac aaatgaacga naatctattt 180
tcctcattca ttaccccaac aataataggn ctccctatcg taattattat cactatgttt 240
ccaagcatta tattcccatc acctacccga ctaatcaata atcgactcat ctccattnca 300
acaatggatt agtgcantga acatgcaaan gcaaggatta tcnn
                                                                   344
<210> 340
<211> 345
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (6)
<223> n equals a,t,g, or c
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<220>
<221> misc feature
<222> (13)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (31)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (88)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (90)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (128)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (135)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (138)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (146)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (153)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (172)
<223> n equals a,t,g, or c
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<220>
<221> misc feature
<222> (173)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (296)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (313)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (339)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (343)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (345)
<223> n equals a,t,g, or c
<400> 340
agacangete tantacgaet cactataggg naaagetggt acgeetgeag gtaceggtee 60
ggaattcccg ggtcgaccca cgcgtccngn aggaggggac agctgcgggc gcggggaggg 120
ggcgccgngc cgcgnggngc catggnggac agnagagccg ggagtccgag anncgggccc 180
gcagcccgag atgtcgccgc catggcttcg ccgcagctct gccgcgcgct ggtgtcggcg 240
caatgggtgg cggaagcgct gcgggccccg cgcgctgggg cagcctctgc agctgntagg 300
acgcctcctg gtnacctggc cggaagctgg ggggcgcgna cgncn
<210> 341
<211> 170
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (20)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (23)
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<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (43)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (86)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (160)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (163)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (164)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (170)
<223> n equals a,t,g, or c
<400> 341
acceaegegt cegeceacgn tenegactag ttetagateg egnaeggeeg etetagagga 60
tocaagetta ettggacatg catgenacgt catagetett etatagtgte acetaaatte 120
aattcactgg ccgtcgtttt acaacgtcgt gactgggaan atnntaaaan
<210> 342
<211> 387
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (238)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (273)
<223> n equals a,t,g, or c
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<220>
<221> misc feature
<222> (328)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (337)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (351)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (366)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (384)
<223> n equals a,t,g, or c
<400> 342
aatgacttgg ttgagtactc accagtcaca gaaaagcatc ttacggatgg catgacagta 60
agagaattat gcagtgctgc cataaccatg agtgataaca ctgcggccaa cttacttctg 120
acaacgatcg gaggaccgaa ggagctaacc gcttttttgc acaacatggg ggatcatgta 180
actogoottg atogttggga accggagotg aatgaagoca taccaaacga cgagogtnac 240
accacgatgc ctgtagcaat ggcaacaacg ttngcaaact attaactggc ggactactta 300
ctctagcttc ccggcaacaa tttatagnct tggtggnggc gggtaaagtt ncaaggccca 360
tttttnggtt tggccttccg gttngtt
<210> 343
<211> 186
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (26)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (64)
<223> n equals a,t,g, or c
<220>
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WO 00/55173

286

PCT/US00/05881

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<221> misc feature
<222> (71)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (109)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (152)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (153)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (160)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (183)
<223> n equals a,t,g, or c
<400> 343
gctgcaggaa attaacagag tctacnagga aatgtacaag actgatctgg agaaagacat 60
tatntcggac ncatctggtg acttccgcaa gctgatggtt gccctggcna aaggttaaaa 120
aacagaagaa tggtccgtcc ttgaatatga anngaatgan ccacatgccc ggatttcctt 180
ganccc
<210> 344
<211> 611
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (8)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (11)
<223> n equals a,t,g, or c
<220>
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<221> misc feature
<222> (285)
<223> n equals a,t,g, or c
<400> 344
tgcaaggnga nactaccete actaaaggga acaaaagetg gagetecace geggtgegge 60
cgctctagaa ctagtggatc ccccgggctg caggaattcg gcacgagctg cgttgggctc 120
cgggaagccg ttcgggctgg ggctgtcggc cgcggggcgg aggcactcgc gcgggggatg 180
gcccactgcg tgaccttggt tcagctgtcc atttectgtg accatctcat tgacaaggac 240
ateggeteea agtetgacce actetgegte ettttacagg atgtnggagg gggeagetgg 300
gctgagcttg gccggactga acgggtgcgg aactgctcaa gccctgagtt ctccaagact 360
ctacagcttg agtaccgctt tgagacagtc cagaagctac gctttggaat ctatgacata 420
gacaacaaga cgccagagct gagggatgat gacttcctag ggggtgctga gtgttcccta 480
ggacagattg tgtccagcca ggtactgact ctccccttga tgctgaagct ggaaaacctg 540
ctgggcgggg gaccatcacg gtctcagctc aggaattaaa ggacaatcgt gtagtaacca 600
tggaggtaga g
                                                                   611
<210> 345
<211> 344
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (289)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (296)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (329)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (331)
<223> n equals a,t,q, or c
<220>
<221> misc feature
<222> (342)
<223> n equals a,t,g, or c
<400> 345
tttccttcta cagtattcct gaatttgacg aatggaaaaa acatatagaa aaccagaaag 60
cctggaaaat aaagtactat aaaggattgg gtactagtac agctaaagaa gcaaaggaat 120
attttgctga tatggaaagg catcgcatct tgtttagata tgctggtcct gaagatgatg 180
```

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ctgccattac cttggcattt agtaagaaga agattgatga cagaaaagaa tggttaacaa 240
attttatgga agaccggaga cagcgtagct acatggctta ccagaggant gattcnctct 300
caactcagac atgaaagatc tataccacnc ntgttgatgg cntt
<210> 346
<211> 506
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (392)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (452)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (453)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (472)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (480)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (495)
<223> n equals a,t,g, or c
ggaaaagccc aaggaaaaag caaagaatag caaaaaaaag ggggccaaga aggaagtggt 60
tgggattggt cttcttttt cttcagtgag ttttttcccc aacaggttct gatggtcctt 120
tggctaccag caaaccagtc cctgcagaaa agtcaggtct tccagtgggt cctgagaacg 180
gagtagaact ttccaaagag gagctgatcc gcaggaagcg cgaggagttc attcagaagc 240
atgggagggg tatggagaag tccaacaagt ccacgaagtc agatgctcca aaggagaagg 300
gcaaaaaagc accccgggtg tgggaactgg gtggctgtgc taacaaagaa atgttggatt 360
acagtacttc caccaccaat ggaacccctg angettgeet tgtetgagga cattaacctt 420
gattccaagg gactgggtct ggggggcact tnnggatctg gactgcacac tntgatgacn 480
                                                                   506
aagggcttgt taaantttcc aaacta
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<210> 347

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<211> 444
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (289)
<223> n equals a,t,g, or c
<400> 347
cggaagggag accatgttcc gagcggcggc tccggggcag ctccggcggg cggcctcatt 60
gctacgattt cagagtaccc tggtaatagc tgagcatgca aatgattccc tagcacccat 120
tactttaaat accattactg cagccacacg ccttggaggt gaagtgtcct gcttagtagc 180
tggaaccaaa tgtgacaagg tggcacaaga tctctgtaaa gtagcaggca tagcaaaagt 240
tctggtggct cagcatgatg tgtacaaagg cctacttcca gaggaactna caccattgat 300
tttggcaact cagaagcagt tcaattacac acacatctgt gctggagcat ctgccttcgg 360
aaagaacctt ttgcccagag tagcagccaa acttgaggtt gccccgattt ctgacatcat 420
tgcaatcaag tcacctgaca catt
<210> 348
<211> 358
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (19)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (52)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (187)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (280)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (295)
<223> n equals a,t,g, or c
<220>
<221> misc feature
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<222> (301)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (317)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (348)
<223> n equals a,t,g, or c
<400> 348
ggcagagaag cagaagcgnc tcagttagag tccagcaaaa ggtttgccaa anagtttatg 60
gacagacatg gaatcccaac cgcacaatgg gaaggctttc accaaacctg aaaggaagcc 120
tgcagcttca ttttgagtgc agacttccct gctttggttg tgaaaggcca gtggtcttgc 180
agctggnaaa aggggtgatt gttgcaaaga gcaaagaaga ggcctgcaag ctgtacaaga 240
gatcatgcag gtaggctggg tcttctggaa aaatttactn ttgtattcat actgnatgaa 300
ntaccgtttt aagtttnaaa aatgttcctc acattaaggg aaattctntt ttgcaacc 358
<210> 349
<211> 321
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (187)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (206)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (240)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (294)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (295)
<223> n equals a,t,g, or c
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<220>
<221> misc feature
<222> (301)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (316)
<223> n equals a,t,g, or c
<400> 349
ggcgctttgc tctgtccacc aagattcctg acaccaaagg ctgcttgcag tgtcgtgtgg 60
tgcggaaccc ctacacgggt gccaccttcc tgctggccgc cctgcccacc agcctgctcc 120
tgctgcagtg gtatgagccg ctgcagaagt ttctgctgct gaagaacttc tccagccctc 180
tgcccanccc agctgggatg ctgganccgc tggtgctgga tgggaaggag ctgccgcagn 240
gtttttttgg ggccgaaggg cctaaagggc ccggttgccg gttcctgttc caannectgc 300
ncctgggagg ttggcnttaa g
                                                                   321
<210> 350
<211> 742
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (618)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (653)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (658)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (683)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (689)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (702)
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<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (707)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (714)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (719)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (722)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (734)
<223> n equals a,t,g, or c
<400> 350
ggtcacgctg acccagtgct cggaaaagct ggtgcagctc atcctgcacg aatacaagat 60
cttcaatgca gaagtgcttt tccgagaaga ctgctccccg gacgagttca tcgatgtgat 120
cgtgggcaac cgggtgtaca tgccctgcct gtatgtttat aacaaaatcg accagatctc 180
catggaagag gtggaccgcc tggcccgaaa acccaacagt gtggtcatca gctgcggcat 240
gaagetgaac ctggactate tgctggagat getetgggag tacttggeec tgacetgeat 300
ctacaccaag aagagaggac agaggccaga cttcacagac gccatcattc tccggaaagg 360
ggcctcagtg gagcacgtgg gcaccagcac caagtacagt ccgcagcggg tgggcctgac 420
ccacaccatg gagcatgagg acgtcatcca gatcgtgaag aagtaacggc gcctgccggg 480
ccttccgccc acctgctcgt ctcccttggq aggtggtccc actgggacac acaaacaccc 540
aaacagaaaa atacaaatac acgtacccca agaaggggtc cctcaagtct ctqctattta 600
cagaagtttc ttcagtangc agaccaaaaa tgtgttgggc aaaagggctc ggntggangc 660
attttccata agactgagcc ctnttcatng ggggttttga gnttgantgc ttancctqna 720
tntgtgcctc caancccctg ac
<210> 351
<211> 272
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (167)
<223> n equals a,t,g, or c
```

293

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<220>
<221> misc feature
<222> (251)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (272)
<223> n equals a,t,g, or c
<400> 351
aatcaggcgg gactgacggc agatcgtatg ctggtcctgt ccagagccgg gcaggcggca 60
gggctgacgt ttaaccagac cagcgagtca ctcagcgcac tggttaaggc gggggtaagc 120
ggtgaggetc agattgegtc catcagecag agtgtggegc gtttctnetc tgeateeggc 180
gtggaggtgg acaaggtcgt tgaagccttc gaggggggcc cgtacccatt tgcctatagt 240
aagcgtatta naataattgc cgtgttttaa an
<210> 352
<211> 256
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (170)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (236)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (248)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (251)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (252)
<223> n equals a,t,g, or c
<400> 352
gcagacgtcc agagcagagt cagccagcat gaccgagcgc cgcgtcccct tctcgctcct 60
geggggeece agetgggace cetteegega etggtaceeg catageegee tettegacea 120
```

```
ggcetteggg etgeeegge tgeeggagga gtggtegeag tggttaggen geageagetg 180
gccaggctac gtgcgcccc tgcccccgc cgcatcgaga gccccgcagt ggccgngccc 240
gctacagncg nncgct
<210> 353
<211> 592
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (35)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (54)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (93)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (277)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (480)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (485)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (522)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (545)
<223> n equals a,t,g, or c
<400> 353
ggttcccttc cacgctgtgg aagcattgta ctttnggtct tcatgataaa tctngctgct 60
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295

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ggtccctgtg gtactcagag tatcgcttcc ctgaagaact cactcagacc ttcatgagct 180
gcaatctcat cactggaatg ttccagcgac tggacaagct gaggaagaat gccttcgcca 240
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gccaggagct tgcctttccg ctgagtccag attggcaagt ggactacgaa gtcatacaca 360
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297

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WO 00/55173 PCT/US00/05881

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gaaccccgtg gaacagaggc agcgcatcat cggagggcaa aaagccangg ggatagtggg 180
ggcgtttttg cagtaaggga cccgaacact gatcgctggg tggccacggg catcgtgtnc 240
ctngggcatc gngtgcagca gggccttatg gcttnttaca ccaaagtnct cnaacttncg 300
tggccttgga tcaagnnaga cctngganca ggaggactnc cgccccanca ttcactaggt 360
tecnaateca gngageagtt tegeanaaan canecanaca canetteece etntttngnn 420
acconneagn gtototnttn anatnootne tngcacnnna neceacaace ecceenence 480
ccconcccc cccccenene cc
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302

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ctgttcaggc cggagccaca gaccgccgtt gaatgggcgg atgctaatta ctatctcccg 120
aaagaatccg cataccagga agggcgctgg gaaacactgc cctttcagcg ggccatcatg 180
aatgcgaatg ggcagcgact acatccgtga gtggaatgtg gtgaagtttg cccgtntcgg 240
ttattccaaa atgctgctgg gngtttatgc ctactttata gggcataagc agnggaacan 300
ccttatttgg tttccncagg atggtggatg cccgagaant ttttggaaaa cccacgttgn 360
gncgattatt tcgggganat ttccggngnt gttggggttt gnccccntgg gttttggnaa 420
aaaganccgg gtaaaaggtt
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304

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tgtgatgaag gagatgggag gccatcacat tntagtcctc tttttgctca aggggggcta 120
taaatttttt gctgacctgc tggattacat caaaggactg antagnaaat agtgnataga 180
tccattcctc atgaactgtg gatttttngc agatctgaag agctattgtn atga
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gtttgaggta cataagaaaa atgtaagggg tgaattcact tattatgaaa tacaagataa 180
tacagggaag atggaagtgg tggtgcatgg acgactgacc acaatcaact gtgaggaagg 240
agataaactg aaactcacct gctttgaatt ggcaccgaaa agtgggaata ccggngagtt 300
gagatetgta atteatagte acateaaggt cateaagace aggaaaaaca agaaagacat 360
actcaatcct gattcaagta tggaaacttc accagacttt ttcttctaaa atctggatgt 420
cattgacgat aatgtttatg gagataaggt ctaagtgcct aaaaaaatgt acatatacct 480
ggttgaaata caacactata catacacac ancatatata ctagcttgtt aatcctatgg 540
aaatggggta tntggagnnc ttttttaatt tttcatagnt ttttttnat aanaatggca 600
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aaaaaana
                                                                   668
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<211> 401
<212> DNA
<213> Homo sapiens
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<223> n equals a,t,g, or c

WO 00/55173 PCT/US00/05881

306

<400> 360 caccattacc agcggcgca atcctccggc cttttccctg acaccggacg gaaagctgac 60 cgctaaaaat gcggatatca gtggcagtgt gaatgcgaac tccgggacgc tcagtaatgt 120 gacgatagct gaaaactgta cgataaacgg tacgctgagg gcggaaaaaa tcgtcgggga 180 cattgtaaag gcggcgagcg cggcttttcc gcgccaggtg gaaagcagtg tggactggcc 240 gtcaggtacc cgtactgtca ccgtgaccga tgaccatcct tttgatcgcc agatagtggt 300 gcttccgctg acgtttcgcg gaagtaagcg tactgtcagc ggcaggacaa cgtattcgat 360 gtgttatctg aaagtactga tgaacggtgc ggtgatttat g <210> 361 <211> 273 <212> DNA <213> Homo sapiens <220> <221> misc feature <222> (156) <223> n equals a,t,g, or c <220> <221> misc feature <222> (189) <223> n equals a,t,g, or c <220> <221> misc feature <222> (236) <223> n equals a,t,g, or c <400> 361 accegaacae ggcactggte ggcgtgcagg tggactegga gcagttegge agceageagg 60 tgagccgtaa ttatcatctg cgcgggcgta ttctgcaggt gccgtcgaac tataacccgc 120 agacgcggca atacagcggt atctgggacg gaacgnttaa accggcatac agcaacaaca 180 tggcctggng tctgtgggat atgctgaccc atccgcgcta cggcatgggg aaacgncttg 240 gtgcggcgga tgtggataaa tgggcgctgt atg <210> 362 <211> 248 <212> DNA <213> Homo sapiens <220> <221> misc feature <222> (5) <223> n equals a,t,g, or c <220> <221> misc feature <222> (37)

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cgaatcccat ctcngcaagg agctgctgga aaaagtcgag ctgacggagg ataacgccag 120
cagactggag gagttttcga aagantggaa ggatgccagt nataagtgga atgccatgtg 180
ggctntcaaa attnagcaga ccaaagacgn caaacgantt ttattctgct atttagtagt 240
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248
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atctggaggc gacggggctg tatcaggtgc cgttgtcagc ggcacagccg ggcgatgtgc 120
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WO 00/55173 PCT/US00/05881

309

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ggettgtgee getgetggan tgacageett negaggettt getgtetegg caeggnaggt 120
ctggcaaacc anggacagac caggnacatg ggaccaaagc cggaacctcc tgctcaacgg 180
gaagteetan eecaccaaag tgegeetgat etggggggge teeetneece cagteaageg 240
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<211> 254
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<400> 366
ggctctacta ggactcacta tanggaaagc tggtacgcct gcaggtaccg gtccggaatt 60
cccgggtcga cccacgcgtc cgcttctctg cctagaaggg ataatattat cactcttcgt 120
tataataaca atcaccatct taattaacca ccttacatta gccagcataa cccctatcat 180
ccttcttgta tntgcagcct gtgaagcnnc actggggctt atccctttta gttatnatct 240
caantacata cgga
<210> 367
<211> 185
<212> DNA
<213> Homo sapiens
<400> 367
gattggattc gacaacaaaa aagacctgct tatctcggtg ggcgatttgg ttgatcgtgg 60
tgcagagaac gttgaatgcc tggaattaat cacattcccc tggttcagag ctgtacgtgg 120
aaaccatgag caaatgatga ttgatggctt atcagagcgt ggaaacgtta atcactggct 180
gctta
<210> 368
<211> 458
<212> DNA
<213> Homo sapiens
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<222> (3)
<223> n equals a,t,g, or c
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<222> (4)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (6)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (15)
<223> n equals a,t,g, or c
<220>
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<222> (27)
<223> n equals a,t,g, or c
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<223> n equals a,t,g, or c
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<221> misc feature
<222> (232)
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<221> misc feature
<222> (250)
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<220>
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<222> (316)
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<222> (340)
<223> n equals a,t,g, or c
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<221> misc feature
<222> (395)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (399)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (404)
<223> n equals a,t,g, or c
<220>
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314

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<222> (415)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (433)
<223> n equals a,t,g, or c
<400> 368
agnnenatag aaagnaegee tgeaggnaee ggteeggaat teeegggteg acceaegegt 60
ccggagtgag ccttgaacgc ctggacctgg acctcacagc tgacagccag ccacccgtct 120
tcaaggtctt cccaggcagt accactgagg actacaacct tattgttatn gaacgtggcg 180
ctgccgctgc acnaccggcc agccagggac tgcgcctgca ggaacccctg gngccccacc 240
cctggntggn atggccattg tcaaggagga ggagacggag gctgccattg gagcccctcc 300
tactgccact gagggncctg agaccaaacc tgtgcttatn gctcttgagg agggtcctgg 360
tgctgagggt tcccggctgg actcactagt ggcanaacna ctcnggctgg aagtngtagc 420
tctgagggac tcngccccag tgttggccgg gacctgat
                                                                   458
<210> 369
<211> 288
<212> DNA
<213> Homo sapiens
<220>
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<222> (15)
<223> n equals a,t,g, or c
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<222> (17)
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<222> (47)
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<222> (56)
<223> n equals a,t,g, or c
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<222> (71)
<223> n equals a,t,g, or c
<220>
<221> misc feature
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315

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<222> (103)
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<220>
<221> misc feature
<222> (114)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (225)
<223> n equals a,t,q, or c
<220>
<221> misc feature
<222> (239)
<223> n equals a,t,g, or c
<400> 369
gcgctggagc tgctngngca ctgcggcgtg tgcagagagc gcctgcnacc cgaganggag 60
ccccgcctgc ngccctgttt gcactcggcc tgtagtgcct gcntagggcc cgcngccccg 120
ccgccgccaa cagctcgggg gacggcgggg cggcgggcga cggcaccgtg gtggactgtc 180
ccgtgtgcaa gcaacagtgc ttctccaaag acatcgtgga gaatnatttc atgcgtgana 240
gtggcagcaa ggctgccacc gacgcccagg atgcgaacca gtgctgca
<210> 370
<211> 292
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (47)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (53)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (60)
<223> n equals a,t,g, or c
<220>
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<222> (61)
<223> n equals a,t,g, or c
<220>
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PCT/US00/05881

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<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (141)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (263)
<223> n equals a,t,g, or c
<400> 370
ccatctttgc attgttcctc atccgcctcc ttgctcgccg cagccgnctc cgncgcgcgn 60
ntcctccgcc gccgcggact ccggcagctt tatcgccaga ntccctgaac tctcgctttc 120
tttttaatcc cctgcatcgg ntcaccggcg tgccccacca tgtcagacgc agccgtagac 180
accageteeg aaateaceae caaggaetta aaggagaaga aggaagtttt ggaaagagge 240
agaaaatgga agagacggcc ctncttaacg gggaatgcta atttagggaa at
<210> 371
<211> 477
<212> DNA
<213> Homo sapiens
<220>
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<222> (35)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (276)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (313)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (342)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (374)
<223> n equals a,t,g, or c
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317

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<220>
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<222> (399)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (410)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (427)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (434)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (447)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (448)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (451)
<223> n equals a,t,g, or c
<400> 371
ggcacaggat aattttaagc atttaaatgg aattnatctt tttcactgta ttgatccaaa 60
tggttccaag cataaaagaa cggacagatc aattttatgt tgtttacgaa aaggagaatc 120
tggccagtca tggcaagggt taacaaaaga aagggcaaag cttaattggc ttagtgtcga 180
cttcaataat tgggaaagac tgggaagatg attcaaatga agacatgtct aattttgaat 240
cgtttctctg aggattcaca agacagtgat gatggnaaaa atgccagatc tgggagtaag 300
ggaatattgt ccntcacctg ggtttttgag gaaaggaaaa tnaactttct ctggcaaggt 360
tttccataat ttgngaggaa ttccccgagt ttgttagcnc ctaaagggcn gttatgctcg 420
tatttgnccc actntaaccc ctttttnnca nccggtttgt ttttttaaaa gggcttc
<210> 372
<211> 443
<212> DNA
<213> Homo sapiens
<220>
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318

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<222> (14)
<223> n equals a,t,g, or c
<220>
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<222> (67)
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<222> (314)
<223> n equals a,t,g, or c
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<222> (329)
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<222> (335)
<223> n equals a,t,g, or c
<220>
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<222> (340)
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<220>
<221> misc feature
<222> (407)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (411)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (426)
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<221> misc feature
<222> (430)
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<400> 372
ggcagagcac tgtnaaacta gaacatgcta aatctgttgc ttccagagcc actgtcctcc 60
agaaganatc cttnaccct gtaggaatgt ttttgaaact aaatttnatg aacgtnaaat 120
ttnccagtgg ttattatgaa cttccttgtc gaagttgaaa ggtgaacaac nctnatattg 180
caaataccgt agagetteag agtgeaagat tetecaetgn angttgggea tteacaaatg 240
ttggatcttt cccaccgtgg gatgaagggt tcagaggcat tgcacccaaa atnacccggg 300
tgaacatacc cagnccaaag cccaggggna cattnatcgn ggacaggccc nccagaattt 360
ggcntgttct ttnccagttg gtaggtgtgg aacttggggt tgaattnatt ncttaaccga 420
attttnccgn ttccttaacc gag
                                                                   443
<210> 373
<211> 464
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (20)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (235)
<223> n equals a,t,g, or c
<400> 373
cggatccgca ggcgcacgtn gcgatgttgt cctctacagc catgtattcg gctcctggca 60
gagacttggg gatggaaccg cacagagccg cgggcccttt gcagctgcga ttttcgccct 120
acgttttcaa cggaggtact atactggcaa ttgctggaga agattttgca attgttgctt 180
ctgatactcg attgagtgaa gggttttcaa ttcatacgcg ggatagcccc aaatnttaca 240
aattaacaga caaaacagtc attggatgca gcggttttca tggagactgt cttacgctga 300
caaagattat tgaagcaaga ctaaagatgt ataagcattc caataataag gccatgacta 360
cgggggcaat tgctgcaatg ctgtctacaa tcctgtattc aaggcgcttc tttccatact 420
                                                                   464
atgtttacaa catcatcggt ggacttgatg aagaaggaaa gggg
<210> 374
<211> 369
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (216)
<223> n equals a,t,g, or c
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321

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<220>
<221> misc feature
<222> (218)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (219)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (221)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (332)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (357)
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<222> (360)
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<220>
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<222> (363)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (369)
<223> n equals a,t,g, or c
<400> 374
ggcacagect ctacagecat gtattegget cetggcagag acttggggat ggaacegeac 60
agageegegg geeetttgea getgegattt tegeeetaeg tttteaaegg aggtaetata 120
ctggcaattg ctggagaaga ttttgcaatt gttgcttctg atactcgatt gagtgaaggg 180
ttttcaattc atacgcggga tagccccaaa tgttgncnna ntaacagaca aaacagtcat 240
tggatgcagc ggttttcatg gagactgtct tacgctgaca aagattattg aagcaagact 300
aaagatgtat aagcattcca ataataaggc cntgactacg gggggcaatg ctggcangcn 360
                                                                   369
gtnctacan
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<210> 375

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<211> 313
<212> DNA
<213> Homo sapiens
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<222> (32)
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<222> (249)
<223> n equals a,t,g, or c
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<222> (259)
<223> n equals a,t,g, or c
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<221> misc feature
<222> (268)
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<220>
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<222> (293)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (308)
<223> n equals a,t,g, or c
<400> 375
tacccttcat cactaaaggc cgcctgtgcg tnttttttta cgggattttt ttatgtcgat 60
gtacacaacc gcccaactgc tggcggcaaa tgagcagaaa tttaagtttg atccgctgtt 120
tetgegtete ttttteegtg agagetatee etteaceaeg gaggaaagte tateteteae 180
aaattccggg actggtaaac atggcgctgt acgtttcgcc gattgtttcc ggtgaaggtt 240
atcocgttnc cotggoggnt tocacctntg aatttaaggc cgggataatg tonaagcccg 300
aagcatgnaa gtg
                                                                   313
<210> 376
<211> 375
<212> DNA
<213> Homo sapiens
<400> 376
cgggttccgg tgaccacgaa ggcggcaaag gcgacggaat ggaggaggtg cctcacgact 60
gtccaggggc cgacagcgcc caggcgggca gaggggcttc atgtcaggga tgccccaacc 120
ageggetgtg egettetgga gegggggeea eteeggacae ggetatagag gaaateaaag 180
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323

PCT/US00/05881

agaaaatgaa gactgtaaaa cacaaaatct tggtattgtc tgggaaaggc ggtgttggga 240 aaagcacatt cagcgcccac cttgcccatg gcctagcaga ggatgaaaac acacagattg 300 ctcttctaga catcgatata tgtgggccat cgattcccaa gataatggga ttggaaggag 360 agcaggttca ccaga <210> 377 <211> 434 <212> DNA <213> Homo sapiens <220> <221> misc feature <222> (9) <223> n equals a,t,g, or c <220> <221> misc feature <222> (17) <223> n equals a,t,g, or c <220> <221> misc feature <222> (22) <223> n equals a,t,g, or c <220> <221> misc feature <222> (32) <223> n equals a,t,g, or c <220> <221> misc feature <222> (33) <223> n equals a,t,g, or c<220> <221> misc feature <222> (47) <223> n equals a,t,g, or c <220> <221> misc feature <222> (58) <223> n equals a,t,g, or c <220> <221> misc feature <222> (64) <223> n equals a,t,g, or c <220>

324

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<221> misc feature
<222> (69)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (73)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (98)
<223> n equals a,t,g, or c
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<221> misc feature
<222> (112)
<223> n equals a,t,g, or c
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<222> (161)
<223> n equals a,t,g, or c
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<221> misc feature
<222> (163)
<223> n equals a,t,g, or c
<220>
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<221> misc feature

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<223> n equals a,t,g, or c
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<221> misc feature
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<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (214)
<223> n equals a,t,g, or c
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<222> (243)
<223> n equals a,t,g, or c
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<222> (262)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (263)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (264)
<223> n equals a,t,g, or c
<220>
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<222> (265)
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WO 00/55173

326

PCT/US00/05881

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<222> (267)
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<222> (279)
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<222> (301)
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<222> (320)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (330)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (337)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (351)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (370)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (381)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (409)
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<223> n equals a,t,g, or c

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<400> 377
ggcacgagng tggctcnagg gngtcacctt cnntgttacc accgttnaca ccaaaagncg 60
gacngagana gtncagaagc tgtgcccagg ggggcagntc ccattcctgc tntatngnac 120
tgaagtgcac acagacacca acaagnttgc ngaatttctg nangcagtgc tgtgccctcc 180
caggtaccc aanctggcag ctctgaaccc tnantccaac acagctgngc tgganatatt 240
tgncaaattn tctgcctaca tnnnnanttc aaacccagna ctcaatgaca atctggagaa 300
nggactcctg aaagccctgn acgttttagn caattantta acatccccc nctcagaaga 360
agtggatgan accagtgctg nagtgaaggt gtctctcaga agaagtttnt ggatagcacg 420
agctcaccct gggg
<210> 378
<211> 506
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (133)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (294)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (367)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (376)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (386)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (389)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (421)
<223> n equals a,t,g, or c
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WO 00/55173

328

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<220>
<221> misc feature
<222> (440)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (443)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (472)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (479)
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<220>
<221> misc feature
<222> (492)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (493)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (496)
<223> n equals a,t,q, or c
<220>
<221> misc feature
<222> (503)
<223> n equals a,t,g, or c
<400> 378
aattttcact cccctcagaa cataacatag taaatggatt gaattatgaa gaatggtttt 60
tatgcgactt accgcagcaa aaataaaggg aaagataagc gctcaataaa cctgtctgtt 120
ttccttaatt ctntgctggc tgataatcat cacctgcagg ttggctccaa ttatttgtat 180
attcataaaa tcgatggaaa aacttttctc tttaccaaaa caaatgacaa gagtctggtt 240
cagaagataa atcgctctaa agcttcagtt gaagatatta agaacagcct cgtngatgac 300
ggaatcattg ggattcccat cttttttgtt tgttgaaggc gacaccattg gtttttgcca 360
gaactgnttt tcgggncggc cacatncgnt tttgacaggt ttttttaatc ggggaaggga 420
ntgtccttaa ggcgtggggn gengttcagt tggggccctg ttggggggac cnccaaggng 480
gtggttatgg cnnggntttc atnggc
                                                                   506
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<210> 379
<211> 550
<212> DNA
<213> Homo sapiens
<220>
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<222> (6)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (9)
<223> n equals a,t,g, or c
<400> 379
gacganacna acceteacta aagggaacaa aagetggage tecacegegg tgeggeeget 60
ctagaactag tggatccccc gggctgcagg aattcggcac gaggccatcc agactgagga 120
agacccggaa acttaggggc cacgtgagcc acggccacgg ccgcataggc aagcaccgga 180
agcaccccgg cggccgcggt aatgctggtg gtctgcatca ccaccggatc aacttcgaca 240
aataccaccc aggctacttt gggaaagttg gtatgaagca ttaccactta aagaggaacc 300
agagettetg cecaactgte aacettgaca aattgtggac tttggteagt gaacagacac 360
gggtgaatgc tgctaaaaac aagactgggg ctgctcccat cattgatgtg gtgcgatcgg 420
gctactataa agttctggga aagggaaagc tcccaaagca gcctgtcatc gtgaaggcca 480
aattetteag cagaagaget gaggagaaga ttaagagtgt tgggggggee tgtgteetgg 540
tggcttgaag
                                                                   550
<210> 380
<211> 573
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (4)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (6)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (10)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (160)
<223> n equals a,t,g, or c
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<400> 380
aagnonagan agccaaccot cactaaaggg aacaaaagct ggagctccac cgcggtgcgg 60
ccgctctaga actagtggat cccccgggct gcaggaattc ggcacgagcg caaagaaggg 120
tggcgagaag aaaaagggcc gttctgccat caacgaaggn taacccgaga atacaccatc 180
aacattcaca agcgcatcca tggagtgggc ttcaagaagc gtgcacctcg ggcactcaaa 240
gagattegga aatttgeeat gaaggagatg ggaacteeag atgtgegeat tgacaeeagg 300
ctcaacaaag ctgtctgggc caaaggaata aggaatgtgc cataccgaat ccgtgtgcgg 360
ctgtccagaa aacgtaatga ggatgaagat tcaccaaata agctatatac tttggttacc 420
tatgtacctg ttaccacttt caaaatttct gtgctaaaca gtgttacagt cgccaagagc 480
ccataaaggg agccctcctg gaagtggatg aggccttggg tctcggctct tcattgcttc 540
ctgagctgca gcagatgcct ttacaaccaa gct
<210> 381
<211> 531
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (5)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (8)
<223> n equals a,t,g, or c
<400> 381
gcagnacnaa ccctcactaa agggaacaaa agctggagct ccaccgcggt gcggccgctc 60
tagaactagt ggatcccccg ggctgcagga attcggcacg aggcggcgtt ggcggcttgt 120
gcagcaatgg ccaagatcaa ggctcgagat cttcgcggga agaagaagga ggagctgctg 180
aaacagctgg acgacctgaa ggtggagctg tcccagctgc gcgtcgccaa agtgacaggc 240
ggtgcggcct ccaagctctc taagatccga gtcgtccgga aatccattgc ccgtgttctc 300
acagttatta accagactca gaaagaaaac ctcaggaaat tctacaaggg caagaagtac 360
aagcccctgg acctgcggcc taagaagaca cgtgccatgc gccgccggct caacaagcac 420
gaggagaacc tgaagaccaa gaagcagcag cggaaggagc ggctgtaccc gctgcggaag 480
tacgcggtca aggcctgagg ggcgcattgt caataaagca cagtggctga g
<210> 382
<211> 300
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (1)
<223> n equals a,t,g, or c
<220>
<221> misc feature
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331

PCT/US00/05881

WO 00/55173

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<222> (5)
<223> n equals a,t,g, or c
<220>
<221> misc feature
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<222> (184)
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<220>
<221> misc feature
<222> (190)
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<220>
<221> misc feature
<222> (203)
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<221> misc feature
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<221> misc feature
<222> (292)
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<220>
<221> misc feature
<222> (293)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (300)
<223> n equals a,t,g, or c
<400> 382
ngggngtacc acaaatataa ggcaaagagg aactgctggn cangagtacg gggtgtggnc 60
atgaatcctg tggagcatcc ttttggaggt ggcaaccacc agcacatcgg caagcctcc 120
accatccgca gagatgcccc tgctggccgc aaagtgggtc tcattgctgc nngcnggant 180
ggangteten ggggaaccaa gantgtgcag gagaaagaga actagtgctg agggcetcaa 240
taaagtttgt gtttatgcca aaaaaaaaa naaaaaaaaa aaaaaaaaa annaaagagn 300
<210> 383
<211> 475
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (36)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (146)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (363)
<223> n equals a,t,g, or c
<220>
<221> misc feature
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<222> (367)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (401)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (404)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (415)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (450)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (451)
<223> n equals a,t,g, or c
<400> 383
atgacgccgg tgcagcgggg gggcccgggg gcctgngtgg ccctgggatg gggaaccgcg 60
gtggcttccg cgaggtttcg gcagtggcat ccggggccgg ggtcgcggcc gtggacgggg 120
ccggggccga ggccgcggac tcgcgnaggc aaggccgagg ataaggagtg gatgcccgtc 180
accaagttgg gccgcttggt caaggacatg aagatcaagt ccctggagga gatctatctc 240
ttctccctgc ccattaagga atcagagatc attgattctt cctgggggct ctctcaagga 300
tgagttttga agatatgcca tgcagaagca gaccctgccg gccacgcacc agttcaagca 360
ttnttgnaac gggattaaat gccactcgtt tggtttaatg nccnagagtg gcacncatcc 420
tgggcaaaac tggcaaattt caagtccttn naagtatggg gaaaatggaa cccaa
<210> 384
<211> 127
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (5)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (8)
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WO 00/55173

334

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<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (31)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (62)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (71)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (103)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (124)
<223> n equals a,t,g, or c
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caatntgnag accagattcc taaggctgca naggggacag tgggatctat tttaggaccg 60
angagattaa ncagagacac aggcaattgt atgtcagcag ctngatttaa cccacctaaa 120
aggngcg
                                                                   127
<210> 385
<211> 317
<212> DNA
<213> Homo sapiens
<220>
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<222> (30)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (151)
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<220>
<221> misc feature
<222> (187)
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<222> (203)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (231)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (264)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (308)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (311)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (316)
<223> n equals a,t,g, or c
<400> 385
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gagaccagtg agaaacgccc cttcatgtgt gcttacccag gctgcaataa gagatatttt 120
aagctgtccc acttacagat gcacagcagg naagcacact ggtgagaaac cataccagtg 180
tgacttnaag gactgtgaac gangttttct cgttcagacc agctcaaaag ncaccaaagg 240
aggacataca ggtgtgaacc attnccagtg taaaattgtt cagcgaaatt ctcccggtcc 300
gaccaacnga ngaccna
                                                                   317
<210> 386
<211> 433
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (295)
<223> n equals a,t,g, or c
<220>
<221> misc feature
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<222> (311)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (359)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (385)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (405)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (407)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (427)
<223> n equals a,t,g, or c
<400> 386
tttcaaaagc tatttaggtq acactataga aggtagcctg caggttaccg gtccggaaat 60
tecegggteg acceaegegt eegeegagag cettageega eggaaactgg acaetggaac 120
cggcagcgcc atgagactcc tcccccgctt gctgctgctt ctcttactcg tgttccctgc 180
cactgtcttg ttccgaggcg gccccagagg cttgttagca gtggcacaag atcttacaga 240
ggatgaagaa acagtagaag attccataat tgaggatgaa gatgatgaag ccgangtaga 300
agaagatgaa nccacagatt ttgtagaaga taaagaggaa gaagatgtgt ctggtgaanc 360
tgaaacttta ccgagtgcag atacnactat actgttttta aaggngnaga ttttccgcca 420
                                                                   433
ataacantgt gaa
<210> 387
<211> 407
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (315)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (356)
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<223> n equals a,t,g, or c

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<220>
<221> misc feature
<222> (359)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (373)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (376)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (407)
<223> n equals a,t,g, or c
<400> 387
atttgaagca aacaggcagc gcgcgacaat ggcggtcgct cgtgcagctt tggggccatt 60
ggtgacgggt ctgtacgacg tgcaggcttt caagtttggg gacttcgtgc tgaagagcgg 120
gettteetee eecatetaca tegatetgeg gggcategtg tetegacege gtettetgag 180
tcaggttgca gatattttat tccaaactgc ccaaaatgca ggcatcagtt ttgacaccgt 240
gtgtggagtg ccttatacag ctttgccatt ggctacagtt atctgttcaa ccaatcaaat 300
tccaatgctt attanaagga aagaaacaaa ggattatgga actaagcgtc ttgtanaang 360
aatattaatc canganaaac tgtttaatca ttgaaatgtt gtcccan
<210> 388
<211> 244
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (215)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (221)
<223> n equals a,t,g, or c
<400> 388
ttcgttcatc tatcggatcg ccacactcac aacaatgagt ggcagatata gcctggtggt 60
tcaggcggcg catttttatt gctgtgttgc gctgtaattc ttctatttct gatgctgaat 120
caatgatgtc tgccatcttt cattaatccc tgaactgttg gttaatacgc ttgagggtga 180
atgcgaataa taaaaaagga gcctgtagct ccctnatgat nttgcttttc atgttcatcg 240
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338

244

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ttcc
<210> 389
<211> 239
<212> DNA
<213> Homo sapiens
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<221> misc feature
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<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (21)
<223> n equals a,t,g, or c
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<221> misc feature
<222> (55)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (64)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (71)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (116)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (128)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (163)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (185)
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<223> n equals a,t,g, or c

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<220>
<221> misc feature
<222> (196)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (202)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (205)
<223> n equals a,t,g, or c
<400> 389
nggactggcg tcagacgtcg nattccggcg cccacggtcg gcttaaaccc tggtncaatc 60
ctgncgcccg ncgtgatgcc agggaagaca gggcgacctg gaagtccaac tacttnctta 120
agatcatnca acgtattggg atgattatcc taaaatgggt tcnattggtg ggtagcgagt 180
acganatggt ggggcntcct anagntagta tggcgagcta gagtcccggc taatgttcc 239
<210> 390
<211> 382
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (5)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (54)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (69)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (102)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (103)
<223> n equals a,t,g, or c
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WO 00/55173

340

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<220>
<221> misc feature
<222> (108)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (126)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (169)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (192)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (217)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (219)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (221)
<223> n equals a,t,g, or c
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<221> misc feature
<222> (235)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (342)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (345)
<223> n equals a,t,g, or c
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<220>
<221> misc feature
<222> (346)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (360)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (374)
<223> n equals a,t,g, or c
<400> 390
tcaangcgca attaaccctc actaaaggga acaaaagctg ggaacgatct ggtntctctg 60
cgcgctgcnc gcacactgag gccgcccggg acaaagcccg gnntcggngc gacctttggt 120
cccggnctca gtgagcgagc gagcgcgcag agagggagtg gccaacttna tcactagggg 180
ttccttgtag tnaatgatta accegccatg ctacttngnc nacgtagcca tgggntacca 240
agetegaget etetagaete gaegegegta atacgaetea etatagggeg aatttgaget 300
ccaccgcggt tgcggccgct ctactagagt cgacctcatg gnttnncccc gaaacccgcn 360
aacacccgct gacncgccct ta
                                                                    382
<210> 391
<211> 375
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (6)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (7)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (48)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (70)
<223> n equals a,t,g, or c
<220>
<221> misc feature
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<222> (104)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (117)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (138)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (146)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (159)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (208)
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<221> misc feature
<222> (223)
<223> n equals a,t,g, or c
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<222> (261)
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<221> misc feature
<222> (269)
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<220>
<221> misc feature
<222> (275)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (279)
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WO 00/55173

PCT/US00/05881

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<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (299)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (351)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (366)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (370)
<223> n equals a,t,g, or c
<400> 391
tgcaanngaa tacacactaa ggacaagtgg actcacggtg cgccctcnga ctagtggtcc 60
cgggtgcagn tgccagggtg gcctgagcga tctacggatg ggcngtatgg agtggangag 120
acgagatgcg ggtgttanag cagggnctga ccggagtgnc acacatgagt gtcaggtgca 180
ggtagtccga gtcggcgaca tgagcctnga gtagagtcat cantcgatga gatctggagg 240
caactggcga gcaagaccgt ntggtgcant gtcantcang ctgttgcagg tgagagcant 300
gcactcgtcg agtggcgaga cagatcaatc tctgttagcg ggtggaggtt ncactcgcgc 360
                                                                   375
tgtggnggtn cactg
<210> 392
<211> 121
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (3)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (9)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (13)
<223> n equals a,t,g, or c
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<220>
<221> misc feature
<222> (56)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (67)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (113)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (118)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (120)
<223> n equals a,t,g, or c
<400> 392
gantcatcng agngtgtgga tttgagccgc cgcatttttt aaccctaaat ctcganatgc 60
atcgtgnttc ctgtccattg gactgtaagg tttatgtagg catcttggga acnatggnan 120
                                                                    121
<210> 393
<211> 83
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (65)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (66)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (70)
<223> n equals a,t,g, or c
<220>
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<221> misc feature
<222> (73)
<223> n equals a,t,g, or c
<400> 393
дусададала алалалала алалалала алалалала алалалала алалалала алалалала 60
                                                              83
aaaanncccn ggngggggcc ccc
<210> 394
<211> 218
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (13)
<223> n equals a,t,g, or c
<220>
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gtcggcgcag aangcgcccc gcacccccgc caggcgcatg tctgcacctc cgcttgccaa 60
aggneetegg teagegactg gatgetegee ateaaggtee agtggaagtt etteaagagg 120
aaaggegeee cegeeceagg etteegegee cagegetege eacgeteagt geeegtttta 180
ccaataaact gagcgacccc aaaaaaaaa aaaaaaag
<210> 395
<211> 83
<212> DNA
<213> Homo sapiens
<220>
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<222> (11)
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<220>
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<222> (13)
<223> n equals a,t,g, or c
<220>
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<222> (83)
<223> n equals a,t,g, or c
<400> 395
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83
aaaaaaaaa aaaaaaaaa aan
<210> 396
<211> 70
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (69)
<223> n equals a,t,g, or c
<400> 396
aaaaaaana
<210> 397
<211> 140
<212> DNA
<213> Homo sapiens
<220>
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<223> n equals a,t,g, or c
<220>
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<220>
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<222> (114)
<223> n equals a,t,g, or c
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<222> (139)
<223> n equals a,t,g, or c
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aatttgacca gagaacaaga ataacccggc ctcagcgccg ggttttcttn gcctcangat 60
cgccccaaa acanataacc aattgtattt atngaaaaat aaatagatac aannnactaa 120
                                                                    140
acatagcaat tcagatctnt
<210> 398
<211> 157
<212> DNA
<213> Homo sapiens
<220>
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<222> (65)
<223> n equals a,t,g, or c
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<222> (121)
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<221> misc feature
<222> (122)
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<220>
<221> misc feature
<222> (123)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (126)
<223> n equals a,t,g, or c
<220>
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348

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<222> (134)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (150)
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aattoggcan agotcaagca gacggggctc aagggggtta catttaataa aaggatgaag 60
атдупавава аваававава вавававава вавававава вавававава 120
                                                                  157
nnnccngggg gggncccccc ccccctttn ccccctt
<210> 399
<211> 358
<212> DNA
<213> Homo sapiens
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<220>
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<222> (84)
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<222> (204)
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<222> (207)
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<220>
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<222> (302)
<223> n equals a,t,g, or c
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<223> n equals a,t,g, or c
<220>
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<221> misc feature

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<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (341)
<223> n equals a,t,g, or c
<400> 399
ggcanagcgg cagaggcggc tcccactctc ggaaccttgt cctgtttttc ccccagctcg 60
gcaagegeea tatgageetg gegnegeeaa tagegaatee tgttgtggge tttttggeet 120
attoccgccc ctcagtcttg ccgggatggc accgcccgca taggacttcc agggttgggc 180
tgagtgggag ttcgactgct gggnctngta attctcgctt tgggggctgc tccttccagg 240
ctggggacac actggggccc gttgttcggt ctcccgtcct ccgacatctt gtctggaact 300
tnegnetnge agttteeata ggagttggag netgtgegge ntaattttgg tggaaaaa 358
<210> 400
<211> 399
<212> DNA
<213> Homo sapiens
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<222> (15)
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<220>
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<222> (27)
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<220>
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<222> (33)
<223> n equals a,t,g, or c
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<222> (46)
<223> n equals a,t,g, or c
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<221> misc feature
<222> (70)
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350

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<220>
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<222> (83)
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<220>
<221> misc feature
<222> (218)
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<221> misc feature
<222> (239)
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<220>

351

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<220>
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<222> (316)
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<220>
<221> misc feature
<222> (325)
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<220>
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<221> misc feature

<223> n equals a,t,g, or c

WO 00/55173 PCT/US00/05881

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<222> (349)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (364)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (382)
<223> n equals a,t,g, or c
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aaaacccaan tcagagtatc canaaatcca agccaggtca aaaccaaaac gaaantntca 120
agcaatccaa atcaagtcaa aaacaaaaac caaagtgccg gtacaggcnt nccgtgggtg 180
atcaggocac cettecacte aaatggagtg ggnaantnee aaagactagt nttaccaant 240
ttcanatntc cggantccaa gngcctgtnc cttcccagng ttnagccgct gnattgatcc 300
tctgtggggg cctgcnaaac gccantctgg cgaggtgttc cactggggna attgcctacc 360
cggnagtgct ctcaggttct gngtccctca agctggcca
<210> 401
<211> 189
<212> DNA
<213> Homo sapiens
<220>
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<221> misc feature
<222> (11)
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<221> misc feature
<222> (162)
<223> n equals a,t,g, or c
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<221> misc feature
<222> (165)
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<220>
<221> misc feature
<222> (166)
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<220>
<221> misc feature
<222> (187)
<223> n equals a,t,g, or c
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naattoggca nagcaaacca caccttotot ttottatgto tttttactac aaactacaag 60
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa anccnngggg ggggcccccc 180
                                                            189
cccccntt
<210> 402
<211> 174
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (10)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (73)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (103)
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<222> (107)
<223> n equals a,t,g, or c
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<222> (130)
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<221> misc feature
<222> (132)
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<220>
<221> misc feature
<222> (146)
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<223> n equals a,t,g, or c

WO 00/55173 PCT/US00/05881

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<220>
<221> misc feature
<222> (149)
<223> n equals a,t,g, or c
<220>
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<222> (167)
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cctctgacac tcnagcctgg gtgacagagc gagactccgt ctnaggnaag gaaaaaaaaa 120
aaaaaaaan cncggggggg gcccngtnc ccaattggcc ctatagnggg tcgt
<210> 403
<211> 263
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (5)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (231)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (236)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (242)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (252)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (260)
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ggcanagcca acccagcagt ccttccctca gctgcctagg aggaagggac ccagctgggt 60
ctgggaccac aagggaggag actgcaccc actgcctctg ggccctggct gtgggcagag 120
gccaccgtgt gtgtcccgag taaccgtgcc gttgtcgtgt gatgccataa gcgtctgtgc 180
anaaagaaaa anaaaaaaan aaa
<210> 404
<211> 478
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (159)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (259)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (427)
<223> n equals a,t,g, or c
<400> 404
tegacecacg egteeggggg etgeageatg ttgetgagga gtgaggaata gttgagecee 60
aagteetgaa gaggegggee ageeaggetg acatetgtgt tteaagtggg getegeeatg 120
ccgggggttc ataggtcact ggctctccaa gtgccagang tgggcaggtg gtggcactga 180
gecececcaa caetgtgeee tggtggagaa ageaetgaee tgteatgeee eeetcaaace 240
tectettetg aegtgeetnt tgeaccete ceattaggae aateagteee eteceatetg 300
ggagteccet tttetttet accetageea tteetggtae ceagecatet geecaagggt 360
geocectect eteccatece eetgeceteg tgggcagece ggetggtttt gtaaatgtgg 420
gttgtgnaca gtgatttttt cttgtattta aaaaaggcca gcattgtggt tcattaaa
<210> 405
<211> 223
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (147)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (158)
<223> n equals a,t,g, or c
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WO 00/55173

<220>

356

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<221> misc feature
<222> (172)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (217)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (223)
<223> n equals a,t,g, or c
<400> 405
agacagcagg acggtggcca tggaagtcgg aatccgctaa ggagtgtgta acaactcacc 60
tgccgaatca actagccctg aaaatggatg gcgctggagc gtcgggccca tacccgtccg 120
tcgccggcag tcgagagtgg acgggancgg cgggggcngc gcgcgcgcg gncgtgatgg 180
tgtgcgtcgg agggcggcgg cggcggcggg ggtgtgnggt ccn
<210> 406
<211> 104
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (8)
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<220>
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<222> (37)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (81)
<223> n equals a,t,g, or c
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<222> (93)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (103)
<223> n equals a,t,g, or c
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357

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<400> 406
cccacgente egeogacage ageageetea ccatgangtt getgatggte etcatgetgg 60
cggccctctc ccagcactgc nacgcaggct ctngctgccc ctna
<210> 407
<211> 66
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (17)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (21)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (57)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (66)
<223> n equals a,t,g, or c
gccctatagt gagtctngta ncaattcact ggccgtcgtt ttacaacgtc gtgacgngga 60
                                                                   66
aaactn
<210> 408
<211> 278
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (6)
<223> n equals a,t,g, or c
<220>
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<222> (19)
<223> n equals a,t,g, or c
<220>
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WO 00/55173

<220>

358

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<222> (252)
 <223> n equals a,t,g, or c
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 <221> misc feature
 <222> (275)
 <223> n equals a,t,g, or c
<400> 408
 gggcanagca agctcctgna cctcaagtga tccacatgcc ttggttgacc aaattgctgg 60
 gattacaggc atgagccaat atgaccagct caaacatctt ctttttaaat gtcagaagca 120
 tgtatagtga ttatttctta tttttcccc cttgatccat ctcaccagat gtttgttgat 180
 tttataagaa ttttcaaact accagettet ggetttgttg aacttgggat ttctgttca 240
                                                                    278
 ctaattttct tnctcctgtc ttgtacttac tttgntgg
 <210> 409
 <211> 168
 <212> DNA
 <213> Homo sapiens
 <220>
 <221> misc feature
 <222> (16)
 <223> n equals a,t,g, or c
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 <222> (127)
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 <222> (140)
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 <222> (143)
 <223> n equals a,t,g, or c
 <220>
 <221> misc feature
 <222> (145)
 <223> n equals a,t,g, or c
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359

<221> misc feature <222> (167) <223> n equals a,t,g, or c <400> 409 aataaaactc taaaangatc actataaaaa aagcaggnac gcctgcaggt accggtccgg 60 aattcccggg tcgacccacg cgtccgacgg ctgcgagaag acgacagaag ggcacggctg 120 cgagaanacg acagaagggn gcnantgaaa gaaggcggca gaaaggnt <210> 410 <211> 415 <212> DNA <213> Homo sapiens <220> <221> misc feature <222> (307) <223> n equals a,t,g, or c <220> <221> misc feature <222> (347) <223> n equals a,t,g, or c <400> 410 tgaataccta agatttctgt cttggggttt ttggtgcatg cagttgatta cttcttattt 60 ttcttaccaa ttgtgaatgt tggtgtgaaa caattaatga agcttttgaa tcatccctat 120 tctgtgtttt atctagtcac ataaatggat taattactaa tttcagttga gaccttctaa 180 ttggttttta ctgaaacatt gagggaacac aaatttatgg gcttcctgat gatgattctt 240 ctaggcatca tgtcctatag tttgtcatcc ctgatgaatg taaaattaca ctgttcacaa 300 aggttingtc tcctttccac tgctattaat catggtcact ctccccnaaa tattatattt 360 tttctattaa aagaaaaaaa tggaaaaaaa ttacaaggca atggaaacta ttata <210> 411 <211> 636 <212> DNA <213> Homo sapiens <220> <221> misc feature <222> (383) <223> n equals a,t,g, or c <220> <221> misc feature <222> (512) <223> n equals a,t,g, or c <221> misc feature <222> (519)

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<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (544)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (547)
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<220>
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<222> (583)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (599)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (603)
<223> n equals a,t,g, or c
<400> 411
gcagatcaga cgtggcgacc cgctgaattt aagcatatta gtcagcggag gagaagaaac 60
taaccaggat tccctcagta acggcgagtg aacagggaag agcccagcgc cgaatccccg 120
ccccgcqcq qqqcqcqqqa catqtqqcqt acqqaaqacc cqctccccqq cqccqctcqt 180
ggggggccca agtccttctg atcgaggccc agcccgtgga cggtgtgagg ccggtagcgg 240
cccccggcgc gccgggcccg ggtcttcccg gagtcgggtt gcttgggaat gcagcccaaa 300
qcqqqtqqta aactccatct aaggctaaat ccccttgtaa atttaactgt tagtccaaag 360
aggaacagct ctttggacac tangaaaaaa ccttgtagag agagtaaaaa atttaacacc 420
catagtaggc ctaaaagcag ccaccaatta agaaagcgtt caagctcaac acccactacc 480
taaaaaatcc caaacatata actgaactcc tnacacccna ttggaccaat ctatcaccct 540
atanaanaac taatggtagt ataagtaaca tgaaaacatt ctncttcgca taagcctgng 600
tanattaaaa cacttgaact gaccattaac aggcca
                                                                   636
<210> 412
<211> 182
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (129)
<223> n equals a,t,g, or c
<220>
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WO 00/55173

361

PCT/US00/05881

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<221> misc feature
<222> (166)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (169)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (170)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (172)
<223> n equals a,t,g, or c
<400> 412
ccattgattt ttatcaatag tcgtattcat acggatagtc ctggtattgt tccatcacat 60
tctgaggatg ctcttcgaac tcttcaaatt cttcttccat atatcacctt aaatagtgga 120
ttgcggtant aaagattgtg cctgtctttt aaccacatca ggctcngann gntctcgtga 180
                                                                   182
ac
<210> 413
<211> 387
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (157)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (253)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (317)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (323)
<223> n equals a,t,g, or c
<220>
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362

<221> misc feature <222> (349) <223> n equals a,t,g, or c <220> <221> misc feature <222> (351) <223> n equals a,t,g, or c <220> <221> misc feature <222> (364) <223> n equals a,t,g, or c<400> 413 tegacecacg egteegeeca egegteegee aagaceacee teettteatt tgetagaagg 60 actcactaga ctcaggaaag ctgttaggct cacagttaca gtttattaca gtaaaaggac 120 agagattaag atcagcaaag ggaggaggt cacagcnacg ttccacgaca gatgaggcga 180 eggettecat etgecetete eeagtggage eatataggea geacetgatt eteacageaa 240 catgtgacaa canccaagaa gtactgccaa tactgccaac cagagcagct tcactcggag 300 atctttgtgt tccaganttt ttngtttgtc ttggagacag ggtctgggnc ngtttgggca 360. 387 gacnaagagt acatggtgga gattcac <210> 414 <211> 276 <212> DNA <213> Homo sapiens <220> <221> misc feature <222> (60) <223> n equals a,t,g, or c <220> <221> misc feature <222> (186) <223> n equals a,t,g, or c <220> <221> misc feature <222> (195) <223> n equals a,t,g, or c <220> <221> misc feature <222> (237) <223> n equals a,t,g, or c<220> <221> misc feature <222> (260)

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<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (266)
<223> n equals a,t,g, or c
<400> 414
gcaaaggtcc atactggtta cttggtttca ttgccaccac ttagtggatg ttcagtttan 60
aaccattttg tctgctccct ctggaagcct tgcgcatagc ttactttgta attgttggag 120
aataactgct gaatttttag ctgttttgag ttgattcgca ccactgcacc acaactcact 180
atgaanacta tttancttat ttattatctt gtgaaaagta taccatgaaa attttgntca 240
tactgtattt atcaagtatn attaanagca ctagat
<210> 415
<211> 192
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (78)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (88)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (99)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (145)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (150)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (164)
<223> n equals a,t,g, or c
<220>
<221> misc feature
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<221> misc feature

WO 00/55173 PCT/US00/05881

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<222> (168)
<223> n equals a,t,g, or c
<400> 415
aaaagattgg actaagacac tggccatacc actggacagg gttatgttaa cacctgaaat 60
tgctgggtct tgagagancc caacgcantt ctgggagang gaccacattg gggggtaggt 120
ccacgggctt ggtgatagaa ttatntctcn atcgacttct tgantgcnat atgaactgta 180
acatttgctt ag
<210> 416
<211> 439
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (7)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (9)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (64)
<223> n equals a, \underline{t}, g, or c
<220>
<221> misc feature
<222> (406)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (417)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (421)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (431)
<223> n equals a,t,g, or c
<220>
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<222> (434)
<223> n equals a,t,g, or c
<400> 416
gcgagantnc gacagaaggg tacggctgcg agagacgaca gaagggtacg gctgcgagaa 60
gacnacagaa gggtacggct gcgagaagac gacagaaggg tacggctgcg agaagacgac 120
agaagggtac ggctgcgaga agacgacaga aggtacggct gcgagaagac gacagaagga 180
tacggctgcg agaagacgac agaagggaga atcttagttc aactttaaat ttgcccacag 240
aaccctctaa atccccttgt aaatttaact gttagtccaa agaggaacag ctctttggac 300
actaggaaaa aaccttgtag agagagtaaa aaatttaaca cccatagtag gcctaaaagc 360
agccaccaat taagaaagcg ttcaaagctc aacacccact acccanaaaa taaaaaanaaa 420
                                                                   439
naaaaacccg nggnccgct
<210> 417
<211> 155
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (9)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (84)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (122)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (123)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (143)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (153)
<223> n equals a,t,g, or c
<400> 417
gacatottnt tggtttttat tttgaaacaa tttttaggct tgttccgggg gtctctgtgc 60
tgcctgtact gtattgacct gttntatagg tgccttttta ttaaaaagaa aattcaaaaa 120
```

366

annaaaaaaa aaattaataa aanaaaaaaa aanca

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<210> 418
<211> 291
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (285)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (286)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (288)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (289)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (291)
<223> n equals a,t,g, or c
<400> 418
gaaaaaagaa atccatatct taaagaaaca gctttcaagt gcctttctgc agtttttcag 60
gagcgcaaga tagatttgga ataggaataa gctctagttc ttaacaaccg acactcctac 120
aagatttaga aaaaagttta caacataatc tagtttacag aaaaatcttg tgctagaata 180
ctttttaaaa ggtattttga ataccattaa aactgctttt ttttttccag caagtatcca 240
accaacttgg ttctgcttca ataaatcttt ggaaaaacta atttnnanna n
<210> 419
<211> 340
<212> PRT
<213> Homo sapiens
<220>
<221> SITE
<222> (2)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
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WO 00/55173

367

PCT/US00/05881

	2> (. 3> Xa		qual	s any	y of	the	nati	ıral	ly o	ccur	ring	L-ar	nino	acio	is
)> 4: Xaa		Trp	Phe	Leu	Trp	Tyr	Val	Lys	Lys	Cys	Gly	Gly	Thr	Thr
1		•		5		•	•		10	_, _	-4-	4	•	15	
Arg	Ile	Ile	Ser 20	Thr	Thr	Asn	Gly	Gly 25	Gln	Glu	Arg	Lys	Phe 30	Val	Gly
Gly	Ser	Gly 35	Gln	Val	Ser	Glu	Arg 40	Ile	Met	Asp	Leu	Leu 45	Gly	Asp	Arg
	50			·		55		-		Asp	60				
65					70					Tyr 75			-		80
				85				_	90	Lys				95	
			100		·			105		Thr	•		110		-
		115					120			Glu		125			
-	130	-	-	-		135			·	Gly	140				
Ala 145	Tyr	Thr	Leu	Asp	Asp 150	Thr	Lys	Pro	Glu	Gly 155	Asn	Tyr	Ala	Ala	11e
Met	Gly	Phe	Ile	Leu 165	Ala	His	Lys	Ala	Arg 170	Lys	Leu	Ala	Arg	Leu 175	Thr
Lys	Glu	Glu	Arg 180	Leu	Lys	Lys	Leu	Cys 185	Glu	Leu	Tyr	Ala	Lys 190	Val	Leu
Gly	Ser	Leu 195	Glu	Ala	Leu	Glu	Pro 200	Val	His	Tyr	Glu	G1u 205	Lys	Asn	Trp
Cys	Glu 210	Glu	Gln	Tyr	Ser	Gly 215	Gly	Cys	Tyr	Thr	Thr 220	Tyr	Phe	Pro	Pro
Gly 225	Ile	Leu	Thr	Gln	Туг 230	Gly	Arg	Val	Leu	Arg 235	Gln	Pro	Val	Asp	Arg 240
lle	Tyr	Phe	Ala	Gly	Thr	Glu	Thr	Ala	Thr	His	Trp	Ser	Gly	Tyr	Met

368

Glu Gly Ala Val Glu Ala Gly Glu Arg Ala Ala Arg Glu Ile Leu His 265 Ala Met Gly Lys Ile Pro Glu Asp Glu Ile Trp Gln Ser Glu Pro Glu 280 Ser Val Asp Val Pro Ala Gln Pro Ile Thr Thr Thr Phe Leu Glu Arg 290 295 300 His Leu Pro Ser Val Pro Gly Leu Leu Arg Xaa Ile Gly Leu Thr Thr 310 Ile Phe Ser Ala Thr Ala Leu Gly Phe Leu Ala His Lys Arg Gly Leu 330 Leu Val Arg Val 340 <210> 420 <211> 111 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (48) <223> Xaa equals any of the naturally occurring L-amino acids <400> 420 Thr Arg Asp Leu Val Ser Phe Ile Ser Gly Ile Arg Leu Tyr Asn Leu Met Leu Ser Val Leu Arg His Lys Arg Gln Asn Val Ala Tyr Phe Arg Ile Cys Phe Phe Ile Glu Val Ser Gly Ile Leu Ser Lys Ile Val Xaa Ser Arg His Cys Ser Leu Cys Ser Ser Gly Thr Ser Cys Pro Leu Leu Ser Leu Gln Ala Thr Gly Asn Ala Ser Val Leu Val Ser Trp Arg Lys 65 70 Ile Thr Trp Gly Glu Gly Thr Ser Cys Gly Lys Ser Lys Cys Arg Tyr

90

Glu Met Arg Arg Leu Pro Gln Leu Lys Val Asp Lys Ser Ala Leu

369

100 105 110

<210> 421

<211> 61

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (1)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 421

Arg Gly Met Asn Leu Arg Asn Ala Phe Asp Gly Asp Val Ser Val Thr
20 25 30

Leu Cys Tyr Ser Gly Ser Ser Asn Asn Ser Lys Ala Asn Tyr Ser Lys 35 40 45

Cys Lys Ile Phe Leu Phe Pro Arg Phe Thr Phe Val Trp 50 60

<210> 422

<211> 51

<212> PRT

<213> Homo sapiens

<400> 422

Thr His Ala Tyr Cys Ser Asn Leu Ser Phe Arg Leu Tyr Asp Gln Trp
1 5 10 15

Arg Ala Trp Met Gln Lys Ser His Lys Thr Arg Asn Gln His Arg Thr
20 25 30

Arg Gly Ser Cys Pro Arg Ala Asp Gly Ala Arg Arg Glu Val Leu Pro 35 40 45

Asp Lys Leu 50

<210> 423

<211> 246

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<212> PRT
<213> Homo sapiens
<220>
<221> SITE
<222> (71)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (101)
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<220>
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<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (147)
<223> Xaa equals any of the naturally occurring L-amino acids
<400> 423
Thr Arg Asn Asp Met Lys Ala Asp Cys Ile Leu Tyr Tyr Gly Phe Gly
                  5
                                    10
Asp Ile Phe Arg Ile Ser Ser Met Val Val Met Glu Asn Val Gly Gln
                                25
Gln Lys Leu Tyr Glu Met Val Ser Tyr Cys Gln Asn Ile Ser Lys Cys
Arg Arg Val Leu Met Ala Gln His Phe Asp Glu Val Trp Asn Ser Glu
     50
                        55
Ala Cys Asn Lys Met Cys Xaa Asn Cys Cys Lys Asp Ser Ala Phe Glu
                     70
Arg Lys Asn Ile Thr Glu Tyr Cys Arg Asp Leu Ile Lys Ile Leu Lys
                                     90
Gln Ala Glu Gly Xaa Gly Met Glu Lys Leu Thr Pro Ile Gly Asn Trp
            100
                                105
Ile Asp Ser Trp Xaa Gly Lys Gly Ala Ala Lys Leu Arg Val Ala Gly
                            120
Val Val Ala Pro Thr Leu Pro Arg Glu Asp Leu Glu Lys Ile Ile Ala
    130
                      135
```

371

Asn Asn Glu Ala His Ala Ile Thr Met Gln Val Thr Lys Ser Thr Gln 180 185 190

Asn Ser Phe Arg Ala Glu Ser Ser Gln Thr Cys His Ser Glu Gln Gly 195 200 205

Asp Lys Lys Met Glu Glu Lys Asn Ser Gly Asn Phe Gln Lys Lys Ala 210 215 220

Ala Asn Met Leu Gln Gln Ser Gly Ser Lys Asn Thr Gly Ala Lys Lys 225 230 235 240

Arg Lys Ile Asp Asp Ala 245

<210> 424

<211> 109

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (77)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 424

Asp His Trp Pro Arg Pro Glu Trp Leu Pro Cys Thr Ser Trp Arg Arg
1 5 10 15

Ala Ser Cys Leu Asn His Val Asn Cys His His Leu Ala Thr Pro Ala 20 25 30

Pro Ala Ser Ala Leu Pro Pro Phe Pro Pro Ser Trp Ser Gly Gly Tyr
35 40 45

Arg Ser Leu Gly Pro Thr Leu Ala Pro Leu Ser Pro Ala Ser Val Cys 50 60

Leu Thr Val Phe Pro Pro Leu Pro Gln Leu Arg Cys Xaa Pro Gln Ala 65 70 75 80

Trp Cys Cys Leu Gly Gly Leu Gly Glu Gly Val Cys Gly Gly Gly Arg
85 90 95

372

Arg Val Lys Thr Glu Ala Arg Cys Gln Asn Gly Leu Glu 100 105

<210> 425 <211> 57 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (5) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (49) <223> Xaa equals any of the naturally occurring L-amino acids <400> 425 Gly Ser Glu Thr Xaa Lys Tyr Leu Val Glu Asp Lys Arg Leu Gly Leu 5 10 Tyr Thr Trp Leu Cys Thr Asp Leu Leu Ser His Ile Gly Asn His His 20 25 Thr Leu Gln Gly Ile Ser Phe Ile Cys Lys Met Gln Arg Leu Val Leu Xaa Asn His Thr Asn Phe Phe Val Leu 50 55

30 33

<210> 426

<211> 99
<212> PRT
<213> Homo sapiens

<220>
<221> SITE
<222> (96)
<223> Xaa equals any of the naturally occurring L-amino acids

<400> 426

Pho Cly Thy Sor Cly App Cly Cly Sor Lys Mot Pla Clp Pla I

Phe Gly Thr Ser Gly Asp Gly Gly Gly Ser Lys Met Ala Gln Ala Ile
1 5 10 15

Phe Glu Ala Leu Glu Gly Met Asp Asn Gln Thr Val Leu Ala Val Gln

373

20 25 30

Ser Leu Leu Asp Gly Gln Gly Ala Val Pro Asp Pro Thr Gly Gln Ser 35 40 45

Val Asn Ala Pro Pro Ala Ile Gln Pro Leu Asp Asp Glu Asp Val Phe 50 55 60

Leu Cys Gly Lys Cys Lys Gln Phe Asn Ser Leu Pro Ala Phe Met 65 70 75 80

Thr His Lys Arg Glu Gln Cys Gln Gly Asn Ala Pro Ala Leu Ala Xaa 85 90 95

Val Ser Leu

<210> 427

<211> 55

<212> PRT

<213> Homo sapiens

<400> 427

Asn Ser Asn Ser Ser Ile Phe Ser Leu Val Ser Val Lys Cys Asp Lys

1 10 15

Ser Thr Tyr Phe Lys Leu Phe Ser Ala Leu Gly Tyr Ser Ser Asn Lys 20 25 30

Asn Thr Asn Leu Trp Val Phe Lys Lys Thr Trp Arg Ile Asn Ser Tyr 35 40 45

Phe Lys Arg Ser Lys Lys Lys 50 55

<210> 428

<211> 54

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (41)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 428

His Thr Leu Ser Asn Leu Glu Phe Ala Gln Lys Val Glu Pro Cys Asn

374

1 10 15 Asp His Val Arg Ala Lys Leu Ser Trp Ala Lys Lys Arg Asp Glu Asp 20 25 Asp Val Pro Thr Val Pro Ser Thr Xaa Gly Glu Glu Arg Leu Tyr Asn 35 40 Pro Phe Leu Arg Val Ala 50 <210> 429 <211> 39 <212> PRT <213> Homo sapiens <400> 429 Arg Gln Thr Lys Val Asn Leu Lys Glu Thr Arg Ser Phe Glu Ile Ile 10 Val Trp Gly Phe Tyr Lys Ser Asn Tyr Cys His Leu His Pro Asp Ser 25 Phe Lys Leu Leu Ile His Pro 35 <210> 430 <211> 133 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (81) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (85) <223> Xaa equals any of the naturally occurring L-amino acids <400> 430 Ala Arg Ala Pro Arg Val Pro Pro Ala Pro His Thr Pro Ser Lys Met 5 Gly Lys Glu Lys Thr His Ile Asn Ile Val Val Ile Gly His Val Asp

25

30

375

Ser Gly Lys Ser Thr Thr Thr Gly His Leu Ile Tyr Lys Cys Gly Gly 35 40 45

Ile Asp Lys Arg Thr Ile Glu Lys Phe Glu Lys Glu Ala Ala Glu Met 50 60

Gly Lys Gly Ser Phe Lys Tyr Ala Trp Val Leu Asp Lys Leu Lys Ala 65 70 75 80

Xaa Val Ser Ala Xaa Ile Thr Ile Asp Ile Ser Leu Trp Lys Phe Glu 85 90 95

Thr Thr Lys Tyr Tyr Ile Thr Ile Ile Asp Ala Pro Gly His Arg Asp 100 105 110

Phe Ile Lys Asn Met Ile Thr Gly Thr Ser Gln Ala Asp Cys Ala Val 115 120 125

Leu Ile Val Ala Ala 130

<210> 431

<211> 190

<212> PRT

<213> Homo sapiens

<400> 431

Leu Cys Trp Ala Arg Pro Leu Pro Ser Gly Pro Val Leu Leu Ala Ala 1 5 10 15

Asn Lys Asp Ser Ser Trp Cys Pro Thr Cys Leu Val His Cys Cys Val 20 25 30

Asn Pro Gly Gly Ser Gly His Arg Arg Gln Pro Arg Pro Arg Val Gln 35 40 45

Glu Lys Cys Ser Leu Glu Ala Arg Thr Thr Ala Ser His Trp Gly Arg

Arg Gly Pro Arg Thr Thr Ser Ala Ser Tyr Leu Pro Ala Ser Ala Arg 65 70 75 80

Gly Pro Arg Asp Ala Val Leu Phe Gln Pro Pro Ala Leu Gly Arg Gly 85 90 95

His Ala Ser Arg Ile Gln Gly Ala Gly Gly Leu Ser Thr Ala Arg Thr 100 105 110

376

Cys Leu Leu Ala Ala Ala Val Gly Glu His Gly Gly Cys Gln Arg 115 120 125

Leu Leu Trp Lys Val Ala Ala Ser Glu Met Ala Gly Ala Ala Gly Val 130 135 140

Arg Leu His Thr Ala Gln Val Ser Ser Gly Arg Leu Ser Trp Gly Gly
145 150 155 160

Ser Ser Ser Ala Glu Gly Trp Trp Gly Val Gln Ser Val Ile Leu Gly 165 170 175

Ala Val Cys Pro Thr Pro Ala Trp Gly Pro His Phe Arg Arg
180 185 190

<210> 432

<211> 310

<212> PRT

<213> Homo sapiens

<400> 432

Gly Pro His Gly Asn Gly Glu Val Arg Trp Pro Leu Pro Pro Pro Pro 1 15

Pro Arg Phe Val Ala Arg Arg Lys Met Ala Asp Leu Glu Glu Gln Leu 20 25 30

Ser Asp Glu Glu Lys Val Arg Ile Ala Ala Lys Phe Ile Ile His Ala 35 40 45

Pro Pro Gly Glu Phe Asn Glu Val Phe Asn Asp Val Arg Leu Leu Leu 50 60

Asn Asn Asp Asn Leu Leu Arg Glu Gly Ala Ala His Ala Phe Ala Gln 65 70 75 80

Tyr Asn Leu Asp Gln Phe Thr Pro Val Lys Ile Glu Gly Tyr Glu Asp 85 90 95

Gln Val Leu Ile Thr Glu His Gly Asp Leu Gly Asn Gly Lys Phe Leu 100 105 110

Asp Pro Lys Asn Arg Ile Cys Phe Lys Phe Asp His Leu Arg Lys Glu 115 120 125

Ala Thr Asp Pro Arg Pro Cys Glu Val Glu Asn Ala Val Glu Ser Trp 130 135 140

Arg Thr Ser Val Glu Thr Ala Leu Arg Ala Tyr Val Lys Glu His Tyr

377

145 150 155 Pro Asn Gly Val Cys Thr Val Tyr Gly Lys Lys Ile Asp Gly Gln Gln Thr Ile Ile Ala Cys Ile Glu Ser His Gln Phe Gln Ala Lys Asn Phe 180 185 Trp Asn Gly Arg Trp Arg Ser Glu Trp Lys Phe Thr Ile Thr Pro Ser 200 Thr Thr Gln Val Val Gly Ile Leu Lys Ile Gln Val His Tyr Tyr Glu 215 Asp Gly Asn Val Gln Leu Val Ser His Lys Asp Ile Gln Asp Ser Leu 225 230 235 Thr Val Ser Asn Glu Val Gln Thr Ala Lys Glu Phe Ile Lys Ile Val 250 Glu Ala Ala Glu Asn Glu Tyr Gln Thr Ala Ile Ser Glu Asn Tyr Gln 260 265 Thr Met Ser Asp Thr Thr Phe Lys Ala Leu Arg Arg Gln Leu Pro Val 275 280 Thr Arg Thr Lys Ile Asp Trp Asn Lys Ile Leu Ser Tyr Lys Ile Gly 295 Lys Glu Met Gln Asn Ala 305 <210> 433 <211> 289 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (287) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (288) <223> Xaa equals any of the naturally occurring L-amino acids <400> 433 Gln Ser Cys Thr Ser Gly Ser Ser Lys Pro Asn Ser Pro Ser Ile Ser

1				5					10					15	
Pro	Ser	Ile	Leu 20	Ser	Asn	Thr	Glu	His 25	Lys	Arg	Gly	Pro	Glu 30	Val	Thr
Ser	Gln	Gly 35	Val	Gln	Thr	Ser	Ser 40	Pro	Ala	Cys	Lys	Gln 45	Glu	Lys	Asp
Asp	Lys 50	Glu	Glu	Lys	Lys	Asp 55	Ala	Ala	Glu	Gln	Val 60	Arg	Lys	Ser	Thr
Leu 65	Asn	Pro	Asn	Ala	Lys 70	Glu	Phe	Asn	Pro	Arg 75	Ser	Phe	Ser	Gln	Pro 80
Lys	Pro	Ser	Thr	Thr 85	Pro	Thr	Ser	Pro	Arg 90	Pro	Gln	Ala	Gln	Pro 95	Ser
Pro	Ser	Met	Val 100	Gly	His	Gln	Gln	Pro 105	Thr	Pro	Val	Tyr	Thr 110	Gln	Pro
Val	Суѕ	Phe 115	Ala	Pro	Asn	Met	Met 120	Tyr	Pro	Val	Pro	Val 125	Ser	Pro	Gly
Val	Gln 130	Pro	Leu	Tyr	Pro	11e 135	Pro	Met	Thr	Pro	Met 140	Pro	Val	Asn	Gln
Ala 145	Lys	Thr	Tyr	Arg	Ala 150	Gly	Lys	Val	Pro	Asn 155	Met	Pro	Gln	Gln	Arg 160
Gln	Asp	Gln	His	His 165	Gln	Ser	Ala	Met	Met 170	His	Pro	Ala	Ser	Ala 175	Ala
Gly	Pro	Pro	Ile 180	Ala	Ala	Thr	Pro	Pro 185	Ala	Tyr	Ser	Thr	Gln 190	Tyr	Val
Ala	Tyr	Ser 195	Pro	Gln	Gln	Phe	Pro 200	Asn	Gln	Pro	Leu	Val 205	Gln	His	Val
Pro	His 210	Tyr	Gln	Ser	Gln	His 215	Pro	His	Val	Tyr	Ser 220	Pro	Val	Ile	Gln
31y 225	Asn	Ala	Arg	Met	Met 230	Ala	Pro	Pro	Thr	His 235	Ala	Gln	Pro	Gly	Leu 240
Val	Ser	Ser	Ser	Ala 245	Thr	Gln	Tyr	Gly	Ala 250	His	Glu	Gln	Thr	His 255	Ala
1et	Tyr	Ala	Cys 260	Pro	Lys	Leu	Pro	Туг 265	Asn	Lys	Glu	Thr	Ser 270	Pro	Ser
he	Tvr	Phe	Ala	Ile	Ser	Thr	Glv	Ser	Leu	Ala	Gln	Gln	Tvr	Xaa	Xaa

379

275 280 285

Pro

<210> 434

<211> 147

<212> PRT

<213> Homo sapiens

<400> 434

Lys Val Thr Pro Asp Leu Lys Pro Thr Glu Ala Ser Ser Ser Ala Phe
1 5 10 15

Arg Leu Met Pro Ala Leu Gly Val Ser Val Ala Asp Gln Lys Gly Lys 20 25 30 `

Ser Thr Val Ala Ser Ser Glu Ala Lys Pro Ala Ala Thr Ile Arg Ile 35 40 45

Val Gln Gly Leu Gly Val Met Pro Pro Lys Ala Gly Gln Thr Ile Thr 50 55 60

Val Ala Thr His Ala Lys Gln Gly Ala Ser Val Ala Ser Gly Ser Gly 65 70 75 80

Thr Val His Thr Ser Ala Val Ser Leu Pro Ser Met Asn Ala Ala Val 85 90 95

Ser Lys Thr Val Ala Val Ala Ser Gly Ala Ala Arg Pro Pro Ser Ala 100 105 110

Ser Ala Gln Glu Pro Pro Pro Cys Gly Arg Ser Leu Ser Ala Pro Arg 115 120 125

Leu Cys Pro Arg Pro Arg Leu Gly Ser Cys Leu His Gly Ser Gln Phe 130 135 140

Pro Ser Leu

145

<210> 435

<211> 151

<212> PRT

<213> Homo sapiens

<220>

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<210> 436

<211> 180

<212> PRT

<213> Homo sapiens

<223 <223	1> S: 2> (4 3> Xa	12)	qual:	s any	y of	the	nati	ural	ly o	ccuri	ring	L-ar	nino	acio	is
<220															
	l> s:														
	2> (•							_						
<22:	3> Xa	aa e	qual	s any	y of	the	nati	ıral	Ly o	ccuri	ring	L-ar	nino	acio	is
	0> 4: -			_			_	_				_	_		
Ala 1	Pro	Ala	Ser	Pro 5	Val	Met	Pro	Pro	10	Thr	Gln	Ser	Pro	15	GIn
Pro	Ala	Gln	Pro	Ala	Pro	Met	Val	Pro	Leu	His	Gln	Lvs	Gln	Ser	Arq
			20					25				-1-	30		
Ile	Thr	Pro	Ile	Gln	Lys	Pro	Arg	Gly	Xaa	Asp	Pro	Val	Glu	Ile	Leu
		35					40					45			
Gln	Glu	Arg	Glu	Tyr	Arg	Leu	Gln	Ala	Arg	Ile	Ala	His	Arg	Ile	Gln
	50					55					60				
Glu	Leu	Glu	Asn	Leu	Pro	Gly	Ser	Leu	Ala	Gly	Asp	Leu	Arg	Thr	Lys
65					70					75					80
Ala	Thr	Ile	Glu	Leu	Lys	Ala	Leu	Arg	Leu	Leu	Asn	Phe	Gln	Arg	Gln
				85					90					95	
Leu	Arg	Gln		Val	Val	Val	Cys		Arg	Arg	Asp	Thr		Leu	Glu
			100					105					110		
		_	_					_	_					_	_
Thr	Ala		Asn	Ala	Lys	Ala	-	Lys	Arg	хаа	Ser		ser	Pro	Cys
		115					120					125			
		D	n1-	~		•		m	•					C	~
AIA	_	Pro	АТА	ser	Leu	Arg	ser	Trp	Arg	ser		Arg	Arg	ser	ser
	130					135					140				
7	60-	7 l a	C0.	A 1 -	c1	N	C	mh	2		mb~	Co=	714		Dho
145	261	HIG	261	MIG	150	Arg	ser	THE	ALG		THE	Ser	TIE	MIG	160
143					130					155					100
Ser	Sor	Mot	Bro	Arc.	Tle	Ser	7~~	Nan	Tlo	ሞኮሎ	Acr	Dro	Sar	Gle	۵ 1 -
261	Der	.ae c	210	165	116	261	ALY	สอน	170	1111	vah	LIO	361	175	710
				103					1,0					1,3	

Lys Ser Arg Ser

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Leu Glu Glu Tyr Leu Asp Glu Phe Asp Pro Cys His Cys Arg Pro Cys
Gln Asn Gly Gly Leu Ala Thr Val Glu Gly Thr His Cys Leu Cys His
         35
Cys Lys Pro Tyr Thr Phe Gly Ala Ala Cys Glu Gln Gly Val Leu Val
                         55
Gly Asn Gln Ala Gly Gly Val Asp Gly Gly Trp Ser Cys Trp Ser Ser
                     70
                                         75
Trp Ser Pro Cys Val Gln Gly Lys Lys Thr Arg Ser Arg Xaa Cys Xaa
Asn Pro Pro Pro Ser Gly Gly Gly Arg Ser Cys Val Gly Glu Thr Thr
Glu Ser Thr Gln Cys Glu Asp Glu Glu Leu Glu His Leu Arg Leu Leu
        115
Glu Pro His Cys Phe Pro Leu Ser Leu Val Pro Thr Glu Phe Cys Pro
    130
                                            140
                        135
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PCT/US00/05881

383

WO 00/55173

Ser 145	Pro	Pro	Ala	Leu	Lys 150	Asp	Gly	Phe	Val	Gln 155	Asp	Glu	Gly	Thr	Met 160
Phe	Pro	Val	Gly	Lys 165	Asn	Val	Val	Tyr	Xaa 170	Cys	Asn	Glu	Gly	Туг 175	Ser
Leu	Ile	Gly	Asn 180	Pro	Val	Ala	Arg	Cys 185	Gly	Glu	Asp	Leu	Arg 190	Trp	Leu
Val	Gly	Glu 195	Met	His	Cys	Gln	Lys 200	Ile	Ala	Cys	Val	Leu 205	Pro	Val	Leu
Met	Asp 210	Gly	Ile	Gln	Ser	His 215	Pro	Gln	Lys	Pro	Phe 220	Tyr	Thr	Val	Gly
Glu 225	Lys	Val	Thr	Val	Ser 230	Cys	Ser	Gly	Gly	Met 235	Ser	Leu	Glu	Gly	Pro 240
Ser	Ala	Phe	Leu	Cys 245	Gly	Ser	Ser	Leu	Lys 250	Trp	Ser	Pro	Glu	Met 255	Lys
Asn	Ala	Arg	Cys 260	Val	Gln	Lys	Glu	Asn 265	Pro	Leu	Thr	Gln	Ala 270	Val	Pro
Lys	Cys	Gln 275	Arg	Trp	Glu	Lys	Leu 280	Gln	Asn	Ser	Arg	Cys 285	Val	Cys	Lys
Met	Pro 290	Tyr	Glu	Cys	Gly	Pro 295	Ser	Leu	Asp	Val	Cys 300	Ala	Gln	Asp	Glu
Arg 305	Ser	Lys	Arg	Ile	Leu 310	Pro	Leu	Thr	Val	Cys 315	Lys	Met	His	Val	Leu 320
His	Cys	Gln	Gly	Arg 325	Asn	Tyr	Thr	Leu	Thr 330	Gly	Arg	Asp	Ser	Cys 335	Thr
Leu	Pro	Ala	Ser 340	Ala	Glu	Lys	Ala	Cys 345	Gly	Ala	Суз	Pro	Leu 350	Trp	Gly
Lys	Cys	Asp 355	Ala	Glu	Ser	Ser	Lys 360	Cys	Val	Cys	Arg	Glu 365	Ala	Ser	Glu
Cys	Glu 370	Glu	Glu	Gly	Phe	Ser 375	Ile	Cys	Val	Glu	Val 380	Asn	Gly	Lys	Glu
G1n 385	Thr	Met	Ser	Glu	Cys 390	Glu	Ala	Gly	Ala	Leu 395	Arg	Cys	Arg	Gly	Gln 400
Ser	Ile	Ser	Val	Thr 405	Ser	Ile	Arg	Pro	Cys 410	Ala	Ala	Glu	Thr	Gln 415	

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Leu Ile Arg Leu Thr Ile Gly Lys Ala Gly Ser Leu Gln Tyr Arg Xaa
                                    10
Xaa Xaa Phe Pro Gly Met Glu Ala Phe Leu Gly Ser Arg Ser Gly Leu
             20
                                 25
Trp Ala Gly Gly Pro Ala Pro Gly Gln Phe Tyr Arg Ile Pro Ser Thr
                             40
Pro Asp Ser Phe Met Asp Pro Ala Ser Ala Leu Tyr Arg Gly Pro Ile
                         55
Thr Arg Thr Gln Asn Pro Met Val Thr Gly Thr Ser Val Leu Gly Val
                     70
Lys Phe Glu Gly Gly Val Val Ile Ala Ala Asp Met Leu Gly Ser Tyr
                                    90
Gly Ser Leu Ala Arg Phe Arg Asn Ile Ser Arg Ile Met Arg Val Asn
            100
                               105
Asn Ser Thr Met Leu Gly Ala Ser Gly Asp Tyr Ala Asp Phe Gln Tyr
                            120
Leu Lys Gln Val Leu Gly Gln Met Val Ile Asp Glu Glu Leu Leu Gly
                        135
                                            140
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Asp 145	Gly	His	Ser	Туr	Ser 150	Pro	Arg	Ala	Ile	His 155	Ser	Trp	Leu	Thr	Arg 160
Ala	Met	Tyr	Ser	Arg 165	Arg	Ser	Lys	Met	Asn 170	Pro	Leu	Trp	Asn	Thr 175	Met
Val	Ile	Gly	Gly 180	Tyr	Ala	Asp	Gly	Glu 185	Ser	Phe	Leu	Gly	Туг 190	Val	Asp
Met	Leu	Gly 195	Val	Ala	Tyr	Glu	Ala 200	Pro	Ser	Leu	Ala	Thr 205	Gly	Tyr	Gly
Ala	Tyr 210	Leu	Ala	Gln	Pro	Leu 215	Leu	Arg	Glu	Val	Leu 220	Glu	Lys	Gln	Pro
Val 225	Leu	Ser	Gln	Thr	Glu 230	Ala	Arg	Asp	Leu	Val 235	Glu	Arg	Cys	Met	Arg 240
Val	Leu	Tyr	Tyr	Arg 245	Asp	Ala	Arg	Ser	Tyr 250	Asn	Arg	Phe	Gln	Ile 255	Ala
Thr	Val	Thr	Glu 260	Lys	Gly	Val	Glu	11e 265	Glu	Gly	Pro	Leu	Ser 270	Thr	Glu
Thr	Asn	Trp 275	Asp	Ile	Ala	His	Met 280	Ile	Ser	Gly	Phe	Glu 285			
<210)> 43	39													
<21	l> 18	35													
	2> PF 3> Hc		sapie	ens											
-101	\~ 4°			•											
)> 43 Ser		Ala	His	Lys	Lys	Gly	Lys	Leu	Pro	Ile	Val	Asn	Glu	Asp
1				5					10					15	
Asp	Glu	Leu	Val 20	Ala	Ile	Ile	Ala	Arg 25	Thr	Asp	Leu	Lys	Lys 30	Asn	Arg
Asp	Туг	Pro 35	Leu	Ala	Ser	Lys	Asp 40	Ala	Lys	Lys	Gln	Leu 45	Leu	Cys	Gly
Ala	Ala 50	Ile	Gly	Thr	His	Glu 55	Asp	Asp	Lys	Tyr	Arg 60	Leu	Asp	Leu	Leu
Ala 65	Gln	Ala	Gly	Val	Asp 70	Val	Val	Val	Leu	Asp 75	Ser	Ser	Gln	Gly	Asn 80
Ser	Ile	Phe	Gln	Ile	Asn	Met	Ile	Lys	Tyr	Ile	Lys	Asp	Lys	Tyr	Pro

386

85 90 95 Asn Leu Gln Val Ile Gly Gly Asn Val Val Thr Ala Ala Gln Ala Lys 105 Asn Leu Ile Asp Ala Gly Val Asp Ala Leu Arg Val Gly Met Gly Ser 120 Gly Ser Ile Cys Ile Thr Gln Glu Val Leu Ala Cys Gly Arg Pro Gln 135 Ala Thr Ala Val Tyr Lys Val Ser Glu Tyr Ala Arg Arg Phe Gly Val 150 155 Pro Val Ile Ala Asp Gly Gly Ile Gln Asn Val Gly His Ile Ala Lys 165 Ala Leu Ala Leu Gly Ala Pro Gln Ser 180 <210> 440 <211> 211 <212> PRT <213> Homo sapiens <400> 440 Leu Gln Gly Arg Ser Thr Pro Ile Trp Pro Ala Leu Ala Thr Val Thr 10 Ser Arg Thr Pro Ala Leu Gly Pro Gln Ala Gly Ile Asp Thr Asn Glu 20 Ile Ala Pro Leu Glu Pro Asp Ala Pro Pro Asp Ala Cys Glu Ala Ser Phe Asp Ala Val Ser Thr Ile Arg Gly Glu Leu Phe Phe Lys Ala 50 Gly Phe Val Trp Arg Leu Arg Gly Gly Gln Leu Gln Pro Gly Tyr Pro 65 Ala Leu Ala Ser Arg His Trp Gln Gly Leu Pro Ser Pro Val Asp Ala Ala Phe Glu Asp Ala Gln Gly His Ile Trp Phe Phe Gln Gly Ala Gln 100 Tyr Trp Val Tyr Asp Gly Glu Lys Pro Val Leu Gly Pro Ala Pro Leu

120

125

387

Thr Glu Leu Gly Leu Val Arg Phe Pro Val His Ala Ala Leu Val Trp 130 135 Gly Pro Glu Lys Asn Lys Ile Tyr Phe Phe Arg Gly Arg Asp Tyr Trp 150 155 Arg Phe His Pro Ser Thr Arg Arg Val Asp Ser Pro Val Pro Arg Arg 170 Pro Leu Thr Gly Glu Gly Cys Pro Leu Arg Ser Thr Leu Pro Ser Arg 180 185 Met Leu Met Ala Met Pro Thr Ser Cys Ala Ala Ser Thr Gly Ser 200 Leu Thr Leu 210 <210> 441 <211> 80 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (40) <223> Xaa equals any of the naturally occurring L-amino acids <400> 441 Gly Gly Ala Gly Lys Leu Leu Ser Phe Thr His Ser Ala Pro Trp Ser Arg Leu Trp Ser Ser Leu Gly Lys Arg Val Thr Gly Glu Ser Gln Gly 20 25 Leu Glu Lys Leu Pro Gly Thr Xaa Asp Gly Leu Ala Ala Leu Thr Gln 40 . Asp Pro Leu Pro Leu Pro Pro Pro Leu Cys Arg Asn Thr Gly Thr Pro 55 Arg Gly Lys Met Ser Phe Ser Arg Leu Gln Phe Ser Pro Arg Lys Leu

70

75

388

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Asn Val His Leu Tyr Ile Met Tyr Tyr Met Glu Ala Lys His Ala Val
  1
                                      10
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Ser Phe Met Thr Cys Thr Gln Asn Val Ala Pro Asp Met Phe Arg Thr

PCT/US00/05881

			20					25					30		
Ile	Pro	Pro 35	Glu	Ala	Asn	Ile	Pro 40	Ile	Pro	Val	Lys	Ser 45	Asp	Met	Val
Met	Met 50	His	Glu	His	His	Lys 55	Glu	Thr	Glu	туг	Lys 60	Asp	Lys	Ile	Pro
Leu 65	Leu	Gln	Gln	Pro	Lys 70	Arg	Glu	Glu	Glu	Glu 75	Val	Leu	Asp	Gln	Gly 80
Asp	Phe	туr	Ser	Leu 85	Leu	Ser	Lys	Leu	Leu 90	Gly	Glu	Arg	Glu	Asp 95	Val
Val	His	Val	His 100	Lys	Tyr	Asn	Pro	Thr 105	Glu	Lys	Ala	Glu	Ser 110	Glu	Ser
Asp	Leu	Val 115	Ala	Glu	Ile	Ala	Asn 120	Val	Val	Gln	Lys	Lys 125	Asp	Leu	Gly
Arg	Ser 130	Asp	Ala	Arg	Glu	Gly 135	Ala	Glu	His	Glu	Arg 140	Gly	Asn	Ala	Ile
Leu 145	Val	Arg	Asp	Arg	Ile 150	His	Lys	Phe	His	Arg 155	Leu	Val	Ser	Thr	Leu 160
Arg	Pro	Pro	Glu	Ser 165	Arg	Val	Phe	Ser	Leu 170	Gln	Gln	Pro	Pro	Pro 175	Gly
Glu	Gly	Thr	Trp 180	Glu	Pro	Glu	His	Thr 185	Gly	Asp	Phe	His	Met 190	Glu	Glu
Ala	Leu	Asp 195	Trp	Pro _.	Gly	Val	Tyr 200	Leu	Leu	Pro	Gly	Xaa 205	Val	Ser	Gly
Val	Ala 210	Leu	Xaa	Pro	Lys	Asn 215	Asn	Leu	Val	Ile	Phe 220	His	Arg	Gly	Asp
His 225	Val	Trp	Asp	Gly	Asn 230	Ser	Phe	Asp	Ser	Lys 235	Phe	Val	Tyr	Gln	Gln 240
Ile	Gly	Leu	Gly	Pro 245	Ile	Glu	Glu	Asp	Thr 250	Ile	Leu	Val	Ile	Asp 255	Pro
Asn	Asn	Ala	Ala 260	Val	Leu	Gln	Ser	Ser 265	Gly	Lys	Asn	Lėu	Phe 270	Tyr	Leu
Pro	His	Gly 275	Leu	Ser	Ile	Asp	Lys 280	Asp	Gly	Asn	Tyr	Trp 285	Val	Thr	Asp
Val	Ala	Leu	His	Gln	Val	Phe	Lvs	Leu	Asp	Pro	Asn	Asn	Lvs	Glu	Glv

	290					295					300				
Pro 305	Val	Leu	Ile	Leu	Gly 310	Arg	Ser	Met	Gln	Pro 315	Gly	Ser	Asp	Gln	Asn 320
His	Phe	Cys	Gln	Pro 325	Thr	Asp	Val	Ala	Val 330	Asp	Pro	Gly	Thr	Gly 335	Ala
Ile	Tyr	Val	Ser 340	Asp	Gly	туг	Cys	Asn 345	Ser	Arg	Ile	Val	Gln 350	Phe	Ser
Pro	Ser	Gly 355	Lys	Phe	Ile	Thr	Gln 360	Trp	Gly	Glu	Glu	Ser 365	Ser	Gly	Ser
Ser	Pro 370	Leu	Pro	Gly	Gln	Phe 375	Thr	Val	Pro	His	Ser 380	Leu	Ala	Leu	Val
Pro 385	Leu	Leu	Gly	Gln	Leu 390	Cys	Val	Ala	Asp	Arg 395	Glu	Asn	Gly	Arg	Ile 400
Gln	Cys	Phe	Lys	Thr 405	Asp	Thr	Lys	Glu	Phe 410	Val	Arg	Glu	Ile	Lys 415	His
Ser	Ser	Phe	Gly 420	Arg	Asn	Val	Phe	Ala 425	Ile	Ser	Туг	Ile	Pro 430	Gly	Leu
		435	Val				440					445			
	450		Val			455					460				
465			Arg		470					475					480
	•	-	Thr	485	-		-	•	490					495	
•			Thr 500		-		•	505		-		٠	510		
-		515	Leu				520					525			
	530		Cys			535					540				
545			Arg		550		Pro	Asn	Leu	11e 555	Pro	val	Gly	rys	Asn 560
Pro	Arg	Gly	Pro	Leu	Gly	Arg									

391

565

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Xaa

392

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Gly Thr Gly Leu Val Pro Ile Arg Gln Ser Thr Lys Phe Asp Ser Ser

Leu Asp Arg Lys Asp Lys Phe Ser Phe Asp Leu Gly Lys Gly Glu Val

Ile Lys Ala Trp Asp Ile Ala Ile Ala Thr Met Lys Val Gly Glu Val

		35					40					45			
Cys	His 50	Ile	Thr	Cys	Lys	Pro 55	Glu	Tyr	Ala	Tyr	Gly 60	Ser	Ala	Gly	Ser
Pro 65	Pro	Lys	Ile	Pro	Pro 70	Asn	Ala	Thr	Leu	Val 75	Phe	Glu	Val	Glu	Leu 80
Phe	Glu	Phe	Lys	Gly 85	Glu	Asp	Leu	Thr	Glu 90	Glu	Glu	Asp	Gly	Gly 95	Ile
Ile	Arg	Arg	Ile 100	Gln	Thr	Arg	Gly	Glu 105	Gly	Tyr	Ala	Lys	Pro 110	Asn	Glu
Gly	Ala	Ile 115	Val	Glu	Val	Ala	Leu 120	Glu	Gly	Tyr	туr	Lys 125	Asp	Lys	Leu
Phe	Asp 130	Gln	Arg	Glu	Leu	Arg 135	Phe	Glu	Ile	Gly	Glu 140	Gly	Glu	Asn	Leu
Asp 145	Leu	Pro	туг	Gly	Leu 150	Glu	Arg	Ala	Ile	Gln 155	Arg	Met	Glu	Lys	Gly 160
Glu	His	Ser	Ile	Val 165	Tyr	Leu	Lys	Pro	Ser 170	Tyr	Ala	Phe	Gly	Ser 175	Val
Gly	Lys	Glu	Lys 180	Phe	Gln	Ile	Pro	Pro 185	Asn	Ala	Glu	Leu	Lys 190	Tyr	Glu
Leu	His	Leu 195	Lys	Ser	Phe	Glu	Lys 200	Ala	Lys	Glu	Ser	Trp 205	Glu	Met	Asn
Ser	Glu 210	Glu	Lys	Leu	Glu	Gln 215	Ser	Thr	Ile	Val	Lys 220	Glu	Arg	Gly	Thr
Val 225	туг	Phe	Lys	Glu	Gly 230	Lys	Tyr	Lys	Gln	Ala 235	Leu	Leu	Gln	Tyr	Lys 240
Lys	Ile	Val	Ser	Trp 245	Leu	Glu	туг	Glu	Ser 250	Ser	Phe	Ser	Asn	Glu 255	Glu
Ala	Gln	Lys	Ala 260	Gln	Ala	Leu	Arg	Leu 265	Ala	Ser	His	Leu	Asn 270	Leu	Ala
Met	Cys	His 275	Leu	Lys	Leu	Gln	Ala 280	Phe	Ser	Ala	Ala	Ile 285	Glu	Ser	Cys
Asn	Lys 290	Ala	Leu	Glu	Leu	Asp 295	Ser	Asn	Asn	Glu	Lys 300	Gly	Leu	Phe	Arg
Arg	Gly	Glu	Ala	His	Leu	Ala	Val	Asn	Asp	Phe	Glu	Leu	Ala	Arg	Ala

394

305 310 315 320 Asp Phe Gln Lys Val Leu Gln Leu Tyr Pro Asn Asn Lys Ala Ala Lys 325 330 Thr Gln Leu Ala Val Cys Gln Gln Arg Ile Arg Arg Gln Leu Ala Arg 340 345 Glu Lys Lys Leu Tyr Ala Asn Met Phe Glu Arg Leu Ala Glu Glu Glu 360 Asn Lys Ala Lys Ala Glu Ala Ser Ser Gly Asp His Pro Thr Asp Thr 375 Glu Met Lys Glu Glu Gln Lys Ser Asn Thr Ala Gly Ser Gln Ser Gln 390 Val Glu Thr Glu Ala 405 <210> 446 <211> 232 <212> PRT <213> Homo sapiens <400> 446 Pro Leu Val Pro Ser Ser Gln Lys Ala Leu Leu Leu Glu Leu Lys Gly 10 Leu Gln Glu Glu Pro Val Glu Gly Phe Arg Val Thr Leu Val Asp Glu 20 Gly Asp Leu Tyr Asn Trp Glu Val Ala Ile Phe Gly Pro Pro Asn Thr Tyr Tyr Glu Gly Gly Tyr Phe Lys Ala Arg Leu Lys Phe Pro Ile Asp 50 55 Tyr Pro Tyr Ser Pro Pro Ala Phe Arg Phe Leu Thr Lys Met Trp His Pro Asn Ile Tyr Glu Thr Gly Asp Val Cys Ile Ser Ile Leu His Pro 90 Pro Val Asp Asp Pro Gln Ser Gly Glu Leu Pro Ser Glu Arg Trp Asn 100 105 Pro Thr Gln Asn Val Arg Thr Ile Leu Leu Ser Val Ile Ser Leu Leu 115 120 125

395

Asn Glu Pro Asn Thr Phe Ser Pro Ala Asn Val Asp Ala Ser Val Met 135 Tyr Arg Lys Trp Lys Glu Ser Lys Gly Lys Asp Arg Glu Tyr Thr Asp 155 Ile Ile Arg Lys Gln Val Leu Gly Thr Arg Trp Thr Arg Val Asn Gly 165 170 Val Lys Val Pro Thr Thr Leu Ala Glu Tyr Cys Val Lys Thr Lys Ala 180 185 Pro Ala Pro Asp Glu Gly Ser Asp Leu Phe Tyr Asp Asp Tyr Tyr Glu 200 Asp Gly Glu Val Glu Glu Glu Ala Asp Ser Cys Phe Gly Asp Asp Glu 210 215 220 Asp Asp Ser Gly Thr Glu Glu Ser 230 <210> 447 <211> 356 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (12) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (53) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (191) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (263) <223> Xaa equals any of the naturally occurring L-amino acids <400> 447

Cys Ser Pro Pro Pro Pro Pro Ala Ala Ala Ala Ala Ala Ala Ala Ala

396

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His	Leu	Met 35	Lys	Lys	Arg	Glu	Lys 40	Gln	Arg	Glu	Gln	Met 45	Glu	Gln	Met
Lys	Gln 50	Arg	Ile	Xaa	Glu	Glu 55	Asn	Ile	Met	Lys	Ser 60	Asn	Ile	Asp	Lys
Lys 65	Phe	Ser	Ala	His	Tyr 70	Asp	Ala	Val	Glu	Ala 75	Glu	Leu	Lys	Ser	Ser 80
Thr	Val	Gly	Leu	Val 85	Thr	Leu	Asn	Asp	Met 90	Lys	Ala	Lys	Gln	Glu 95	Ala
Leu	Val	Lys	Glu 100	Arg	Glu	Lys	Gln	Leu 105	Ala	Lys	Lys	Glu	Gln 110	Ser	Lys
Glu	Leu	Gln 115	Met	Lys	Leu	Glu	Lys 120	Leu	Arg	Glu	Lys	Glu 125	Arg	Lys	Lys
Glu	Ala 130	Lys	Arg	Lys	Ile	Ser 135	Ser	Leu	Ser	Phe	Thr 140	Leu	Glu	Glu	Glu
Glu 145	Glu	Gly	Gly	Glu	Glu 150	Glu	Glu	Glu	Ala	Ala 155	Met	Tyr	Glu	Glu	Glu 160
Met	Glu	Arg	Glu	Glu 165	Ile	Thr	Thr	Lys	Lys 170	Arg	Lys	Leu	Gly	Lys 175	Asn
Pro	Asp	Val	Asp 180	Thr	Ser	Phe	Leu	Pro 185	Asp	Arg	Asp	Arg	Glu 190	Xaa	Glu
Glu	Asn	Arg 195	Leu	Arg	Glu	Glu	Leu 200	Arg	Gln	Glu	Trp	Glu 205	Ala	Lys	Gln
Glu	Lys 210	Ile	Lys	Ser	Glu	Glu 215	Ile	Glu	Ile	Thr	Phe 220	Ser	Tyr	Trp	Asp
Gly 225	Ser	Gly	His	Arg	Arg 230	Thr	Val	Lys	Met	Arg 235	Lys	Gly	Asn	Thr	Met 240
Gln	Gln	Phe	Leu	Gln 245	Lys	Ala	Leu	Glu	11e 250	Leu	Arg	Lys	Asp	Phe 255	Ser
Glu	Leu	Arg	Ser 260	Ala	Gly	Xaa	Glu	Gln 265	Leu	Met	Tyr	Ile	Lys 270	Glu	Asp

Leu Ile Ile Pro His His Ser Phe Tyr Asp Phe Ile Val Thr Lys

397

275 280 285

Ala Arg Gly Lys Ser Gly Pro Leu Phe Asn Phe Asp Val His Asp Asp 290 295 300

Val Arg Leu Leu Ser Asp Ala Thr Val Glu Lys Asp Glu Ser His Ala 305 310 315 320

Gly Lys Val Val Leu Arg Ser Trp Tyr Glu Lys Asn Lys His Ile Phe 325 330 335

Pro Ala Ser Arg Trp Glu Pro Tyr Asp Pro Glu Lys Lys Trp Asp Lys 340 345 350

Tyr Thr Ile Arg 355

<210> 448

<211> 88

<212> PRT

<213> Homo sapiens

<400> 448

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Ser Ser Glu Asn Phe Asp Asp Tyr Met Lys Glu Val Gly Val Gly Phe 20 25 30

Ala Thr Arg Lys Val Ala Gly Met Ala Lys Pro Asn Met Ile Ile Ser 35 40

Val Asn Gly Asp Val Ile Thr Ile Lys Ser Glu Ser Thr Phe Lys Asn 50 60

Thr Glu Ile Ser Phe Ile Leu Gly Gln Glu Phe Asp Glu Ala Leu Gln 65 70 75 80

Met Thr Gly Lys Ser Arg Ala Pro 85

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<213> Homo sapiens

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398

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<400> 449

Leu Ile Leu Val Leu Met Phe Val Val Trp Met Lys Arg Arg Asp Lys

1 10 15

Glu Arg Gln Ala Lys Gln Leu Leu Ile Asp Pro Glu Asp Asp Val Arg 20 25 30

Asp Asn Ile Leu Lys Tyr Asp Glu Glu Gly Gly Glu Glu Asp Gln 35 40 45

Asp Tyr Asp Leu Ser Gln Leu Gln Gln Pro Asp Thr Val Glu Pro Asp 50 55

Ala Ile Lys Pro Val Gly Ile Xaa Arg Met Asp Glu Arg Pro Ile His 65 70 75 80

Ala Glu Pro Gln Tyr Pro Val Arg Ser Ala Ala Pro His Pro Gly Asp 85 90 95

Ile Gly Asp Phe Ile Asn Glu Gly Leu Lys Ala Ala Asp Asn Asp Pro $100 \hspace{1cm} 105 \hspace{1cm} 110$

Thr Ala Pro Pro Tyr Asp Ser Leu Leu Val Phe Asp Tyr Glu Gly Ser 115 120 125

Gly Ser Thr Xaa Gly Ser Leu Ser Ser Leu Asn Ser Ser Ser Gly
130 135 140

Gly Glu Gln Asp Tyr Asp Tyr Leu Asn Asp Trp Gly Pro Arg Phe Lys
145 150 155 160

Lys Leu Ala Asp Met Tyr Gly Gly Gly Asp Asp 165 170

<210> 450

<211> 34

<212> PRT

<213> Homo sapiens

<400> 450

399

Lys Val Lys Ala Cys Cys Lys Asp Ile Phe Phe Leu Leu Glu Gly
1 5 10 15

Asn Thr Lys Arg Lys Ile Ser Phe Phe His Gly Ala Phe Asp Asn Phe 20 25 30

Ser Leu

<210> 451

<211> 148

<212> PRT

<213> Homo sapiens

<220>

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<222> (43)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (89)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 451

Arg Thr Leu His Pro Ala Thr Gly Pro Arg Ala Arg Pro Pro Arg Gly
1 5 10 15

Trp Arg Arg Arg Leu Cys Ala Gln Gly Pro Ala Pro Asp Trp Asp Pro 20 25 30

Gly Val Pro Pro Gly Leu Ala Ser Cys Gly Xaa Thr Val Trp Leu His 35 40 45

Phe Ser Asp Pro Ser Leu Gly Arg Lys Val Lys Glu Thr Gly Pro Ala
50 55 60

Ser Ala Phe Gly Leu Trp Phe Leu Asp Arg Val Leu Ser Pro Ser Pro 65 70 75 80

Pro Ser Ser Pro Asn Leu Ser His Xaa Arg Pro Leu Pro Ala Ala Pro 85 90 95

Ser Leu Leu Gly Ile Gly Ser Pro Glu Pro Pro Ser Pro Glu Pro Pro 100 105 110

Thr Pro Leu Pro Gly Pro Cys Gly Cys Trp Ala Ser His Leu Lys Glu 115 120 125

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Gly Lys Val Val Gln Pro Glu Pro Val Glu Gln Cys Pro Val Trp Pro
                        135
Pro Lys Pro Lys
145
<210> 452
<211> 83
<212> PRT
<213> Homo sapiens
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<400> 452
Asp Ser His Arg Pro Arg Ala Met Arg Ala Leu Trp Val Leu Gly Leu
                  5
                                    10
Ser Cys Xaa Leu Leu Thr Phe Gly Ser Val Arg Xaa Asp Asp Glu Val
             20
Asp Val Asp Gly Thr Val Glu Glu Asp Leu Gly Lys Ser Arg Glu Gly
                             40
Ser Arg Thr Asp Asp Glu Val Val Gln Arg Glu Glu Glu Ala Ile Xaa
     50
                         55
                                             60
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Val Gly Trp Ile Lys Cys Ile Pro Asn Lys Arg Thr Xaa Glu Xaa Lys
65 70 75 80

Ser Arg Lys

<210> 453

<211> 240

<212> PRT

<213> Homo sapiens

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<222> (234)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 453

Gly Trp Leu Pro Cys Gly Ser Ser Val Val Pro Ala Thr Pro Gly Ser

Pro Pro Ser Arg Phe Trp Leu Leu Pro Ala Met Ala Leu Arg Val Leu 20 25 30

Leu Leu Thr Ala Leu Thr Leu Cys His Gly Phe Asn Leu Asp Thr Glu
35 40 45

Asn Ala Met Thr Phe Gln Glu Asn Ala Arg Gly Phe Gly Gln Ser Val 50 60

Val Gln Leu Gln Gly Ser Arg Val Val Gly Ala Pro Gln Glu Ile 65 70 75 80

Val Ala Ala Asn Gln Arg Gly Ser Leu Tyr Gln Cys Asp Tyr Ser Thr 85 90 95

Gly Ser Cys Glu Pro Ile His Leu Gln Val Pro Val Glu Ala Val Asn 100 105 110

Met Ser Leu Gly Leu Ser Leu Ala Ala Thr Thr Ser Pro Pro Gln Leu 115 120 125

Leu Ala Cys Gly Pro Thr Val His Gln Thr Cys Ser Glu Asn Thr Tyr 130 135 140

Val Lys Gly Leu Cys Phe Leu Phe Gly Ser Asn Leu Arg Gln Gln Pro 145 150 155 160

Gln Lys Phe Pro Glu Ala Leu Arg Gly Cys Pro Gln Glu Asp Ser Asp 165 170 175

402

 Ile
 Ala
 Phe
 Leu
 Ile
 Asp
 Gly
 Ser
 Gly
 Ser
 Ile
 Ile
 Pro
 His
 Asp
 Phe

 Arg
 Arg
 Met
 Lys
 Glu
 Phe
 Val
 Ser
 Thr
 Val
 Met
 Glu
 Glu
 Leu
 Lys
 Lys
 Lys
 Leu
 Lys
 Ser
 Leu
 Met
 Gln
 Tyr
 Ser
 Glu
 Phe
 Arg
 Ile

 His
 Phe
 Thr
 Ser
 Lys
 Ser
 Ser
 Arg
 Thr
 Xaa
 Leu
 Thr
 Gln
 Asp
 His
 Trp

 225
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 Lys
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 Thr
 Xaa
 Leu
 Thr
 Gln
 Asp
 His
 Trp

<210> 454 <211> 244

<212> PRT <213> Homo sapiens <220> <221> SITE <222> (206) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (227) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (229) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (239) <223> Xaa equals any of the naturally occurring L-amino acids <400> 454 Lys Trp Cys Ser Trp Thr Leu Leu Lys Ile Trp Glu Val Thr Cys Thr Trp Lys Leu Pro Thr Leu Ala Lys Phe Ser Pro Tyr Leu Gly Gln Met

20 25 30

Ile Asn Leu Arg Arg Leu Leu Ser His Ile His Ala Ser Ser Tyr

403

		35					40					45			
		-													
Ile	Ser 50	Pro	Glu	Lys	Glu	Glu 55	Gln	Tyr	Ile	Ala	Gln 60	Phe	Thr	Ser	Gln
Phe 65	Leu	Ser	Leu	Gln	Cys 70	Leu	Gln	Leu	Leu	Tyr 75	Val	Asp	Ser	Leu	Phe 80
Phe	Leu	Arg	Gly	Arg 85	Leu	Asp	Gln	Leu	Leu 90	Arg	His	Val	Met	Asn 95	Pro
Leu	Glu	Thr	Leu 100	Ser	Ile	Thr	Asn	Cys 105	Arg	Leu	Ser	Glu	Gly 110	Asp	Val
Met	His	Leu 115	Ser	Gln	Ser	Pro	Ser 120	Val	Ser	Gln	Leu	Ser 125	Val	Leu	Ser
Leu	Ser 130	Gly	Val	Met	Leu	Thr 135	Asp	Val	Ser	Pro	Glu 140	Pro	Leu	Gln	Ala
Leu 145	Leu	Glu	Arg	Ala	Ser 150	Ala	Thr	Leu	Gln	Asp 155	Leu	Val	Phe	Asp	Glu 160
Суѕ	Gly	Ile	Thr	Asp 165	Asp	Gln	Leu	Leu	Ala 170	Leu	Leu	Pro	Ser	Leu 175	Ser
His	Cys	Ser	Gln 180	Leu	Thr	Thr	Leu	Ser 185	Phe	Tyr	Gly	Asn	Ser 190	Ile	Ser
Ile	Ser	Ala 195	Leu	Gln	Ser	Leu	Leu 200	Gln	His	Leu	Ile	Gly 205	Xaa	Ser	Asn
Leu	Thr 210	His	Val	Leu	Ţyr	Pro 215	Val	Pro	Leu	Glu	Ser 220	Tyr	Glu	Asp	Ile
His 225	Gly	Xaa	Leu	Xaa	Leu 230	Glu	Arg	Leu	Leu	Ser 235	Ala	Cys	Gln	Xaa	Gln 240
Gly	Val	Ala	Val												

<210> 455

<211> 195

<212> PRT

<213> Homo sapiens

<400> 455

His Glu Gly Thr Gln Ser Phe Val Phe Gln Arg Glu Glu Ile Ala Gln 1 5 15

404

Leu Ala Arg Gln Tyr Ala Gly Leu Asp His Glu Leu Ala Phe Ser Arg 20 25 30

Leu Ile Val Glu Leu Arg Arg Leu His Pro Gly His Val Leu Pro Asp 35 40 45

Glu Glu Leu Gln Trp Val Phe Val Asn Ala Gly Gly Trp Met Gly Ala 50 55 60

Met Cys Leu Leu His Ala Ser Leu Ser Glu Tyr Val Leu Leu Phe Gly 65 70 75 80

Thr Ala Leu Gly Ser Arg Gly His Ser Gly Arg Tyr Trp Ala Glu Ile 85 90 95

Ser Asp Thr Ile Ile Ser Gly Thr Phe His Gln Trp Arg Glu Gly Thr

Thr Lys Ser Glu Val Phe Tyr Pro Gly Glu Thr Val Val His Gly Pro 115 120 125

Gly Glu Ala Thr Ala Val Glu Trp Gly Pro Asn Thr Trp Met Val Glu 130 135 140

Tyr Gly Arg Gly Val Ile Pro Ser Thr Leu Ala Phe Ala Leu Ala Asp 145 150 155 160

Thr Val Phe Ser Thr Gln Asp Phe Leu Thr Leu Phe Tyr Thr Leu Arg 165 170 175

Ser Tyr Ala Arg Gly Leu Arg Leu Glu Leu Thr Thr Tyr Leu Phe Gly $180 \hspace{1cm} 185 \hspace{1cm} 190$

Gln Asp Pro 195

<210> 456

<211> 36

<212> PRT

<213> Homo sapiens

<400> 456

Leu Val Thr Leu Leu His Ala Met Gln Ala Arg Asp Lys Thr Leu Gly

Leu Ala Thr Leu Cys Ile Gly Gly Gly Gln Gly Ile Ala Met Val Ile 20 25 30 Glu Arg Leu Asn 35

<210> 457

<211> 152

<212> PRT

<213> Homo sapiens

<220>

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<222> (86)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

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<222> (114)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 457

Val Thr Ala Ala Ala Ser Val Arg Ala Leu Gln Val Thr Val Ala Gly
1 5 10 15

Leu Leu Val Phe Phe Leu Phe Gly Ala Pro Leu Asp Ser Leu Pro 20 25 30

Ser Met Lys Ala Leu Ser Pro Val Arg Gly Cys Tyr Glu Ala Val Cys 35 40 45

Cys Leu Ser Glu Arg Ser Leu Ala Ile Ala Arg Gly Arg Gly Lys Gly 50 55 60

Pro Ala Ala Glu Glu Pro Leu Ser Leu Leu Asp Asp Met Asn His Cys 65 70 75 80

Tyr Ser Arg Leu Arg Xaa Leu Val Pro Gly Val Pro Arg Gly Thr Gln 85 90 95

Leu Ser Gln Val Glu Ile Leu Gln Arg Val Ile Asp Tyr Ile Leu Asp 100 105 110

Leu Xaa Val Val Leu Ala Glu Pro Ala Pro Gly Pro Pro Asp Gly Pro 115 120 125

His Leu Pro Ile Gln Thr Ala Glu Leu Ala Pro Glu Leu Val Ile Ser 130 135 140

Asn Asp Lys Arg Ser Phe Cys His 145 150 <210> 458 <211> 31

WO 00/55173 PCT/US00/05881

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<212> PRT
<213> Homo sapiens
<220>
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<222> (17)
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<222> (25)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
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<222> (31)
<223> Xaa equals any of the naturally occurring L-amino acids
Leu Leu Asn Asn Phe Ile Phe Leu Glu Thr His Tyr Leu Trp Ala Cys
Xaa Thr Trp Thr Ile Trp Pro Asn Xaa Leu Asp Lys Lys Gly Xaa
<210> 459
<211> 157
<212> PRT
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<223> Xaa equals any of the naturally occurring L-amino acids
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407

<220> <221> SITE <222> (130) <223> Xaa equals any of the naturally occurring L-amino acids Asp Pro Arg Val Arg Glu Thr Thr Val Lys Ala Arg Ala Arg Ser Gln 10 His Ala Gly Gly Pro Glu Leu Gly Leu Ser Gln Xaa Tyr Val Thr Pro Arg Arg Pro Phe Glu Lys Ser Arg Leu Asp Gln Glu Leu Lys Leu Ile 40 Gly Glu Tyr Gly Leu Arg Asn Lys Arg Glu Val Trp Arg Val Lys Phe 55 Thr Leu Ala Lys Ile Arg Lys Xaa Ala Arg Glu Leu Leu Thr Leu Asp Glu Lys Asp Pro Arg Arg Leu Phe Glu Gly Asn Ala Leu Leu Arg Arg Leu Val Arg Ile Gly Val Leu Asp Glu Gly Lys Met Lys Leu Asp Tyr 105 Ile Leu Gly Leu Lys Met Arg Ile Leu Gly Glu Xaa Ser Ala Asp Pro 120 115 Gly Xaa Ser Ser Trp Gly Trp Pro Ile His Pro Pro Cys Pro Val Leu 135 Ile Arg Gln Ala Thr Gln Val Arg Lys Gln Val Val Asn <210> 460 <211> 136 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (119) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE

<222> (130)

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Ile Trp Ala Pro Phe Pro His His Gln Gly Ser Gly Ser Gln Val Ser
Ser Tyr Gly Thr Gly Ala Leu Lys Ser His Ile Met Ala Ala Lys Ala
                                 25
Val Ala Asn Thr Met Arg Thr Ser Leu Gly Pro Asn Gly Leu Asp Lys
Met Met Val Asp Lys Asp Gly Asp Val Thr Val Thr Asn Asp Gly Ala
Thr Ile Leu Ser Met Met Asp Val Asp His Gln Ile Ala Lys Leu Met
 65
                     70
                                         75
Val Glu Leu Ser Lys Ser Gln Asp Asp Glu Ile Gly Asp Gly Asp His
                 85
                                     90
Gly Gly Cys Pro Gly Arg Arg Pro Ala Gly Arg Arg Pro Ser Ser
                               105
Cys Trp Thr Ala Ala Phe Xaa Arg Ser Gly Ser Pro Thr Val Thr Ser
        115
                           120
Arg Xaa Pro Ala Leu Ala Xaa Glu
    130
                       135
<210> 461
<211> 390
<212> PRT
<213> Homo sapiens
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<222> (11)
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<220>
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<222> (14)
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<223> Xaa equals any of the naturally occurring L-amino acids
<220>
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<400> 461
Cys Gly Asn Trp Trp Val Pro Arg Ala Gly Xaa Asn Trp Xaa Arg Gly
                  5
                                     10
Ser Arg Phe Leu Phe Val Asp Arg Cys Asp Arg His Leu Thr Met Gln
Ile Phe Val Lys Thr Leu Thr Gly Lys Thr Ile Thr Leu Glu Val Glu
                            40
Pro Ser Asp Thr Ile Glu Asn Val Lys Ala Lys Ile Gln Asp Lys Glu
Gly Ile Pro Pro Asp Gln Gln Arg Leu Ile Phe Ala Gly Lys Gln Leu
                     70
                                         75
Glu Asp Gly Arg Thr Leu Ser Asp Tyr Asn Ile Gln Lys Glu Ser Thr
                 85
                                     90
Leu His Leu Val Leu Arg Leu Arg Gly Gly Met Gln Ile Phe Val Lys
                                105
Thr Leu Thr Gly Lys Thr Ile Thr Leu Glu Val Glu Pro Ser Asp Thr
        115
                            120
                                                125
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Ile	Glu 130	Asn	Val	Lys	Ala	Lys 135	Ile	Gln	Asp	Lys	Glu 140	Gly	Ile	Pro	Pro
Asp 145	Gln	Gln	Arg	Leu	Ile 150	Phe	Ala	Gly	Lys	Gln 155	Leu	Glu	Asp	Gly	Arg 160
Thr	Leu	Ser	Asp	Туг 165	Asn	Ile	Gln	Lys	Glu 170	Ser	Thr	Leu	His	Leu 175	Val
Leu	Arg	Leu	Arg 180	Gly	Gly	Met	Gln	Ile 185	Phe	Val	Lys	Thr	Leu 190	Thr	Gly
Lys	Thr	Ile 195	Thr	Leu	Glu	Val	Glu 200	Pro	Ser	Asp	Thr	11e 205	Glu	Asn	Val
Lys	Ala 210	Lys	Ile	Gln	Asp	Lys 215	Glu	Gly	Ile	Pro	Pro 220	Asp	Gln	Gln	Arg
Leu 225	Ile	Phe	Ala	Gly	Lys 230	Gln	Leu	Glu	Asp	Gly 235	Arg	Thr	Leu	Ser	Asp 240
Tyr	Asn	Ile	Gln	Lys 245	Glu	Ser	Thr	Leu	His 250	Leu	Val	Leu	Arg	Leu 255	Arg
Gly	Gly	Met	Gln 260	Ile	Phe	Val	Lys	Thr 265	Leu	Thr	Gly	Lys	Thr 270	Ile	Thr
Leu	Glu	Val 275	Glu	Pro	Ser	Asp	Thr 280	Ile	Glu	Asn	Val	Lys 285	Ala	Lys	Ile
Gln	Asp 290	Lys	Glu	Gly	Ile	Pro 295	Pro	Asp	Gln	Gln	Arg 300	Leu	Ile	Phe	Ala
31y 305	Lys	Gln	Leu	Glu	Asp 310	Gly	Arg	Thr	Leu	Ser 315	Asp	Tyr	Asn	Ile	Gln 320
Lys	Glu	Ser	Thr	Leu 325	His	Leu	Val	Leu	Arg 330	Leu	Arg	Gly	Gly	Met 335	Gln
lle	Phe	Val	Lys 340	Thr	Leu	Thr	Gly	Lys 345	Thr	Ile	Thr	Leu	Glu 350	Val	Glu
Pro	Ser	Asp 355	Thr	Ile	Glu	Asn	Val 360	Lys	Ala	Arg	Ser	Arg 365	Gln	Gly	Arg
lis	Pro 370	Pro	Asp	Gln	Gln	Xaa 375	Leu	Ile	Leu	Leu	Gly 380	Lys	Xaa	Xaa	Lys
1rp 185	Xaa	Xaa	Pro	Phe	Asp 390										

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<210> 462
<211> 171
<212> PRT
<213> Homo sapiens
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<222> (142)
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<222> (155)
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<400> 462
Cys Ser Thr Val Arg Ile Pro Gly Ser Thr His Ala Ser Gly Leu Ser
               5
                                    10
Arg Arg Ala Ser Pro Val Tyr Leu Ala Ser Met Ser Gly Arg Gly Lys
            20
Thr Gly Gly Lys Ala Arg Ala Lys Ala Lys Ser Arg Ser Ser Arg Ala
                             40
Gly Leu Gln Phe Pro Val Gly Arg Val His Arg Leu Leu Arg Lys Gly
                         55
His Tyr Ala Glu Arg Val Gly Ala Gly Xaa Pro Val Tyr Leu Ala Ala
65
Val Leu Glu Tyr Leu Thr Ala Glu Ile Leu Glu Leu Ala Gly Asn Ala
                                     90
Ala Arg Asp Asn Lys Lys Thr Arg Ile Ile Pro Arg His Leu Gln Leu
           100
                                105
Ala Ile Arg Asn Asp Glu Glu Leu Asn Lys Leu Leu Gly Gly Val Thr
                                                125
       115
                            120
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412

Ile Ala Gln Gly Arg Arg Xaa Ala Gln His Pro Gly Arg Xaa Cys Cys 130 135 Pro Arg Arg Pro Ala Pro Pro Trp Gly Arg Xaa Pro Phe Gly Gly Gln 150 155 Glu Arg Ala Thr Lys Ala Ser Gln Gly Val Leu 165 <210> 463 <211> 433 <212> PRT <213> Homo sapiens <400> 463 Arg Val Arg Ala Pro Pro Arg Pro Pro Leu Gly Pro Ser Arg Pro Ser 5 . 10 His His Val His Pro Leu Gln Leu Pro Gly Ile Arg Glu Val Thr Ile Asn Gln Ser Leu Leu Ala Pro Leu Arg Leu Asp Ala Asp Pro Ser Leu 40 Gln Arg Val Arg Gln Glu Glu Ser Glu Gln Ile Lys Thr Leu Asn Asn 50 55 Lys Phe Ala Ser Phe Ile Asp Lys Val Arg Phe Leu Glu Gln Gln Asn Lys Leu Leu Glu Thr Lys Trp Thr Leu Leu Gln Glu Gln Lys Ser Ala Lys Ser Ser Arg Leu Pro Asp Ile Phe Glu Ala Gln Ile Ala Gly Leu . 100 Arg Gly Gln Leu Glu Ala Leu Gln Val Asp Gly Gly Arg Leu Glu Ala 120 Glu Leu Arg Ser Met Gln Asp Val Val Glu Asp Phe Lys Asn Lys Tyr 130 135 Glu Asp Glu Ile Asn Arg Arg Thr Ala Ala Glu Asn Glu Phe Val Val 150 155 Leu Lys Lys Asp Val Asp Ala Ala Tyr Met Ser Lys Val Glu Leu Glu

170

413

Ala	Lys	Val	Asp 180	Ala	Leu	Asn	Asp	Glu 185	Ile	Asn	Phe	Leu	Arg 190	Thr	Leu
Asn	Glu	Thr 195	Glu	Leu	Thr	Glu	Leu 200	Gln	Ser	Gln	Ile	ser 205	Asp	Thr	Ser
Val	Val 210	Leu	Ser	Met	Asp	Asn 215	Ser	Arg	Ser	Leu	Asp 220	Leu	Asp	Gly	Ile
11e 225	Ala	Glu	Val	Lys	Ala 230	Gln	Tyr	Glu	Glu	Met 235	Ala	Lys	Cys	Ser	Arg 240
Ala	Glu	Ala	Glu	Ala 245	Trp	Tyr	Gln	Thr	Lys 250	Phe	Glu	Thr	Leu	Gln 255	Ala
Gln	Ala	Gly	Lys 260	His	Gly	Asp	Asp	Leu 265	Arg	Asn	Thr	Arg	Asn 270	Glu	Ile
Ser	Glu	Met 275	Asn	Arg	Ala	Ile	Gln 280	Arg	Leu	Gln	Ala	Glu 285	Ile	Asp	Asn
Ile	Lys 290	Asn	Gln	Arg	Ala	Lys 295	Leu	Glu	Ala	Ala	Ile 300	Ala	Glu	Ala	Glu
Glu 305	Arg	Gly	Glu	Leu	Ala 310	Leu	Lys	Asp	Ala	Arg 315	Ala	Lys	Gln	Glu	Glu 320
Leu	Glu	Ala	Ala	Leu 325	Gln	Arg	Ala	Lys	Gln 330	Asp	Met	Ala	Arg	Gln 335	Leu
Arg	Glu	Tyr	Gln 340	Glu	Leu	Met	Ser	Val 345	Lys	Leu	Ala	Leu	Asp 350	Ile	Glu
Ile	Ala	Thr 355	Tyr	Arg	Lys	Leu	Leu 360	Glu	Gly	Glu	Glu	Ser 365	Arg	Leu	Ala
Gly	Asp 370	Gly	Val	Gly	Ala	Val 375	Asn	Ile	Ser	Val	Met 380	Asn	Ser	Thr	Gly
Gly 385	Ser	Ser	Ser	Gly	Gly 390	Gly	Ile	Gly	Leu	Thr 395	Leu	Gly	Gly	Thr	Met 400
Gly	Ser	Asn	Ala	Leu 405	Ser	Phe	Ser	Ser	Ser 410	Ala	Gly	Pro	Gly	Leu 415	Leu
Lys	Ala		Ser 420		Arg								Ser 430		Arg

Asp

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<211> 121
<212> PRT
<213> Homo sapiens
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<400> 464
Gly Ser Gly Cys Val Phe Ala Ile Leu Gly Arg Arg Cys Ser Arg Pro
                                     10
Trp Arg Ile Trp Pro Gly Glu Pro Leu Gln Arg Ala Pro Pro Ala Ala
                                 25
Gly Thr Arg Trp Pro His Gly His Arg Ser Ser Pro Val Gly Thr Pro
         35
                             40
                                                 45
Gly Xaa Ala Pro Asn Val Pro Ala Ile Trp Gln Gln Pro Leu Trp Xaa
                         55
Glu Tyr Ser Cys Glu Tyr Gly Ser Met Lys Phe Tyr Ala Leu Cys Gly
```

415

65 70 75 80

Phe Gly Gly Val Leu Ser Cys Gly Leu Thr His Thr Ala Val Val Pro 85 90 95

Leu Asp Leu Val Lys Cys Arg Met Gln Val Asp Pro Gln Xaa Tyr Lys 100 105 110

Gly Xaa Xaa Asn Xaa Ile Leu Ile Asn 115 120

<210> 465

<211> 68

<212> PRT

<213> Homo sapiens

<400> 465

Arg Ile Pro Ala Pro Ala Ser Ser Arg His Ser Gly Gly Arg Cys Ala 1 5 10 15

Ala Gly Pro Arg Gly Pro Pro Ala Thr Ala Ser Arg Ala Leu Arg Ala 20 25 30

Val His Arg Pro Leu Asp Ala Ala Arg Gly Arg Thr Gly Ser Thr Ser 35 40 45

His Leu Cys Ser Ser Ser Tyr Thr Ile Gly Cys Leu Leu Trp Phe Ser 50 60

Gln Lys Ala Met

65

<210> 466

<211> 224

<212> PRT

<213> Homo sapiens

<400> 466

Ala Thr Ile Leu Glu Arg Glu Ala Glu Gln Ser Arg Leu Gly Ala Thr 1 5 10 15

Glu Arg Ala Ala Ala Ala Met Asn Pro Glu Tyr Asp Tyr Leu Phe 20 25 30

Lys Leu Leu Ile Gly Asp Ser Gly Val Gly Lys Ser Cys Leu Leu 35 40

416

Leu Arg Phe Ala Asp Asp Thr Tyr Thr Glu Ser Tyr Ile Ser Thr Ile 55 Gly Val Asp Phe Lys Ile Arg Thr Ile Glu Leu Asp Gly Lys Thr Ile 70 Lys Leu Gln Ile Trp Asp Thr Ala Gly Gln Glu Arg Phe Arg Thr Ile Thr Ser Ser Tyr Tyr Arg Gly Ala His Gly Ile Ile Val Val Tyr Asp 100 105 Val Thr Asp Gln Glu Ser Tyr Ala Asn Val Lys Gln Trp Leu Gln Glu 115 120 Ile Asp Arg Tyr Ala Ser Glu Asn Val Asn Lys Leu Leu Val Gly Asn 135 Lys Ser Asp Leu Thr Thr Lys Lys Val Val Asp Asn Thr Thr Ala Lys 155 Glu Phe Ala Asp Ser Leu Gly Ile Pro Phe Leu Glu Thr Ser Ala Lys 170 Asn Ala Thr Asn Val Glu Gln Ala Phe Met Thr Met Ala Ala Glu Ile 185 190 Lys Lys Arg Met Gly Pro Gly Ala Ala Ser Gly Glu Arg Pro Asn 200 195 Leu Lys Ile Asp Ser Thr Pro Val Lys Pro Ala Gly Gly Cys Cys

<210> 467

<211> 76

<212> PRT

<213> Homo sapiens

<400> 467

Ser Glu Ala Pro Gly Glu Ser Val Gly Thr Thr Pro Glu Ala Gln Met

1 5 10 15

220

215

Lys Thr Gly Pro Phe Ala Glu His Ser Asn Gln Leu Trp Asn Ile Ser 20 25 30

Ala Val Pro Ser Trp Ser Lys Val Asn Gln Gly Leu Ile Arg Met Tyr

417

35 40 45 Lys Ala Glu Cys Leu Glu Lys Phe Pro Val Ile Gln His Phe Lys Phe Gly Ser Leu Leu Pro Ile His Pro Val Thr Ser Gly 65 70 <210> 468 <211> 111 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (31) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (35) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (47) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (49) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (78) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (97) <223> Xaa equals any of the naturally occurring L-amino acids <400> 468 Ser Leu Ala Arg Thr Gly Pro Arg Ser Leu Ala Arg Pro Cys Arg Arg 10 Arg Pro Ala His Arg His Pro Leu Gln Pro Cys Pro Pro Gly Xaa Cys

Pro Arg Xaa Pro Thr Ala Asp Val Arg Arg Pro Arg His Arg Xaa Arg
35 40 45

Xaa Glu Leu His Ala His Asn Val Thr Ser Pro Pro Ala Pro Thr Ala 50 60

Trp Ala Ala Pro Ala Pro Gln His Gln Pro Gln Pro Leu Xaa Leu Val 65 70 75 80

Pro Gly Arg Arg Val Cys Ser Arg Leu Leu Pro Arg Cys Ala Cys Gly 85 90 95

Xaa Cys Cys Pro Gly Val Ala Leu Ala Gly Arg Ile Pro Trp Asn 100 105 110

<210> 469

<211> 459

<212> PRT

<213> Homo sapiens

<400> 469

Pro Arg Val Arg Pro Arg Val Arg Pro Arg Val Arg Leu Ser Ser Pro 1 5 10 15

Ser Pro Val Cys Leu Pro Pro Ala Ala Ala Thr Met Thr Thr Ser Ile
20 25 30

Arg Gln Phe Thr Ser Ser Ser Ser Ile Lys Gly Ser Ser Gly Leu Gly 35 40 45

Gly Gly Ser Ser Arg Thr Ser Cys Arg Leu Ser Gly Gly Leu Gly Ala
50 60

Gly Ser Cys Arg Leu Gly Ser Ala Gly Gly Leu Gly Ser Thr Leu Gly 65 70 75 80

Gly Ser Ser Tyr Ser Ser Cys Tyr Ser Phe Gly Ser Gly Gly Tyr
85 90 95

Gly Ser Ser Phe Gly Gly Val Asp Gly Leu Leu Ala Gly Gly Glu Lys 100 105 110

Ala Thr Met Gln Asn Leu Asn Asp Arg Leu Ala Ser Tyr Leu Asp Lys 115 120 125

Val Arg Ala Leu Glu Glu Ala Asn Thr Glu Leu Glu Val Lys Ile Arg 130 135 140

Asp 145	Trp	Tyr	Gln	Arg	G1n 150	Ala	Pro	Gly	Pro	155	Arg	Asp	Tyr	Ser	160
Tyr	Tyr	Arg	Thr	11e 165	Glu	Glu	Leu	Gln	Asn 170	Lys	Ile	Leu	Thr	Ala 175	Thr
Val	Asp	Asn	Ala 180	Asn	Ile	Leu	Leu	Gln 185	Ile	Asp	Asn	Ala	Arg 190	Leu	Ala
Ala	Asp	Asp 195	Phe	Arg	Thr	Lys	Phe 200	Glu	Thr	Glu	Gln	Ala 205	Leu	Arg	Leu
	210			-		Asn 215	•		-	-	220		_		
Thr 225	Leu	Ala	Arg	Ala	Asp 230	Leu	Glu	Met	Gln	Ile 235	Glu	Asn	Leu	Lys	Glu 240
Glu	Leu	Ala	Tyr	Leu 245	Lys	Lys	Asn	His	Glu 250	Glu	Glu	Met	Asn	Ala 255	Leu
_	_		260	_	-	Glu		265				-	270		
		275				Ile	280					285			
	290			_		Arg 295					300				
305					310	Arg				315					320
		_	_	325		Ile			330					335	
			340			Ser		345			-		350		
_		355				Glu	360		-			365			
	370	_			_	Ser 375					380				_
385					390	Asn				395					400
Lys	Thr	Arg	Leu	Glu 405	Gln	Glu	Ile	Ala	Thr 410	Tyr	Arg	Arg	Leu	Leu 415	Glu

420

Gly Glu Asp Ala His Leu Thr Gln Tyr Lys Lys Glu Pro Val Thr Thr 420 425 430

Arg Gln Val Arg Thr Ile Val Glu Val Gln Asp Gly Lys Val Ile 435 440 445

Ser Ser Arg Glu Gln Val His Gln Thr Thr Arg 450 455

<210> 470

<211> 158

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (158)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 470

Pro Pro Pro Pro Pro Pro Glu Leu Cys Ser Met Ala Ser Arg Arg
1 5 10 15

Met Glu Thr Lys Pro Val Ile Thr Cys Leu Lys Thr Leu Leu Ile Ile 20 25 30

Tyr Ser Phe Val Phe Trp Ile Thr Gly Val Ile Leu Leu Ala Val Gly
35 40 45

Val Trp Gly Lys Leu Thr Leu Gly Thr Tyr Ile Ser Leu Ile Ala Glu 50 60

Asn Ser Thr Asn Ala Pro Tyr Val Leu Ile Gly Thr Gly Thr Thr Ile
65 70 75 80

Val Val Phe Gly Leu Phe Gly Cys Phe Ala Thr Cys Arg Gly Ser Pro 85 90 95

Trp Met Leu Lys Leu Tyr Ala Met Phe Leu Ser Leu Val Phe Leu Ala 100 105 110

Glu Leu Val Ala Gly Ile Ser Gly Phe Val Phe Arg His Glu Ile Lys 115 120 125

Asp Thr Phe Leu Arg Thr Tyr Thr Asp Ala Met Gln Thr Tyr Asn Gly
130 135 140

Asn Asp Glu Arg Ser Arg Ala Val Asp His Val Gln Arg Xaa 145 150 155

421

<210> 471

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<211> 59
<212> PRT
<213> Homo sapiens
<400> 471
Val Leu Phe Phe Tyr Glu Cys Pro Asn Leu Cys Phe Pro Leu Pro Ser
                  5
Gln Thr Val Trp Pro Val Glu Ser Val Trp Phe Val Phe Ile Ser Pro
Ser Phe Leu Glu Gln Gly Leu Arg Pro Cys His Ile Ser Tyr Ala Leu
                             40
His Pro Arg Leu Phe Trp Thr Leu Lys Val Asp
     50
<210> 472
<211> 320
<212> PRT
<213> Homo sapiens
<220>
<221> SITE
<222> (48)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
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<220>
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<223> Xaa equals any of the naturally occurring L-amino acids
<220>
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<222> (105)
<223> Xaa equals any of the naturally occurring L-amino acids
<400> 472
Asp Pro Asp Glu Val Phe Pro Val Cys Leu Pro Leu Thr Gly Asp Ala
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PCT/US00/05881

WO 00/55173

Gly	Glu	Asp	Gly 20	Gly	Lys	Met	Leu	His 25	Leu	Pro	Glu	Trp	Pro 30	Glu	Gln
Pro	Pro	Gly 35	Gly	Pro	Ala	Ala	Leu 40	Gln	Val	Arg	Gly	Ala 45	Glu	Asp	Xaa
Xaa	Leu 50	Ser	Phe	Xaa	Asp	Cys 55	Glu	Ser	Leu	Gln	Ala 60	Val	Phe	Asp	Pro
Ala 65	Ser	Cys	Pro	His	Met 70	Leu	Arg	Ala	Pro	Ala 75	Arg	Val	Leu	Gly	Glu 80
Ala	Val	Leu	Pro	Phe 85	Ser	Pro	Ala	Leu	Ala 90	Glu	Val	Thr	Leu	Gly 95	Ile
Gly	Arg	Gly	Ala 100	Gly	Ser	Ser	Trp	Xaa 105	Tyr	His	Glu	Glu	Glu 110	Ala	Asp
Ser	Thr	Ala 115	Lys	Ala	Met	Val	Thr 120	Glu	Met	Cys	Leu	Gly 125	Glu	Glu	Asp
Phe	Gln 130	Gln	Leu	Gln	Ala	Gln 135	Glu	Gly	Val	Ala	Ile 140	Thr	Phe	Суѕ	Leu
Lys 145	Glu	Phe	Arg	Gly	Leu 150	Leu	Ser	Phe	Ala	Glu 155	Ser	Ala	Asn	Leu	Asn 160
Leu	Ser	Ile	His	Phe 165	Asp	Ala	Pro	Gly	Arg 170	Pro	Ala	Ile	Phe	Thr 175	Ile
Lys	Asp	Ser	Leu 180	Leu	Asp	Gly	His	Phe 185	Val	Leu	Ala	Thr	Leu 190	Ser	Asp
Thr	Asp	Ser 195	His	Ser	Gln	Asp	Leu 200	Gly	Ser	Pro	Glu	Arg 205	His	Gln	Pro
Val	Pro 210	Gln	Leu	Gln	Ala	His 215	Ser	Thr	Pro	His	Pro 220	Asp	Asp	Phe	Ala
Asn 225	Asp	Asp	Ile	Asp	Ser 230	Туr	Met	Ile	Ala	Met 235	Glu	Thr	Thr	Ile	Gly 240
Asn	Glu	Gly	Ser	Arg 245	Val	Leu	Pro	Ser	Ile 250	Ser	Leu	Ser	Pro	Gly 255	Pro
Gln	Pro	Pro	Lys 260	Ser	Pro	Gly	Pro	His 265	Ser	Glu	Glu	Glu	Asp 270	Glu	Ala
Glu	Pro	Ser	Thr	Val	Pro		Thr	Pro	Pro	Pro		Lys 285	Phe	Arg	Ser

423

Leu Phe Phe Gly Ser Ile Leu Ala Pro Val Arg Ser Pro Gln Gly Pro 290 295 300

Ser Leu Cys Trp Arg Lys Thr Val Arg Val Lys Ala Glu Pro Arg Thr 305 310 315 320

<210> 473

<211> 331

<212> PRT

<213> Homo sapiens

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<220>

<221> SITE

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<220>

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<222> (299)

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<220>

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<222> (324)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 473

Pro Pro Cys Ala Val Pro Gly Pro Arg Leu Ser Pro Lys Leu Arg Thr
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Pro Ser Asn Ser Arg Glu Ser Xaa Ile Cys Val Ser Gly Arg Ala Glu 20 25 30

Ala Leu Thr Phe Arg His Gly Ala Glu Gly Ser Asp Arg Arg Gln 35 40 45

Arg Arg Glu Gly Val Leu Gly Pro Ala Leu Leu Cys Arg Pro Trp Glu 50 55 60

Val Leu Gly Ala His Glu Val Pro Ser Arg Asn Ile Phe Ser Glu Gln

65					70					75					80
Thr	Ile	Pro	Pro	Ser 85	Ala	Lys	Tyr	Gly	Gly 90	Arg	His	Thr	Val	Thr 95	Met
Ile	Pro	Gly	Asp 100	Gly	Ile	Gly	Pro	Glu 105	Leu	Met	Leu	His	Val 110	Lys	Ser
Val	Phe	Arg 115	His	Ala	Cys	Val	Pro 120	Val	Asp	Phe	Glu	Glu 125	Val	His	Val
Ser	Ser 130	Asn	Ala	Asp	Glu	Glu 135	Asp	Ile	Arg	Asn	Ala 140	Ile	Met	Ala	Ile
Arg 145	Arg	Asn	Arg	Val	Ala 150	Leu	Lys	Gly	Asn	Ile 155	Glu	Thr	Asn	His	Asn 160
Leu	Pro	Pro	Ser	His 165	Lys	Ser	Arg	Asn	Asn 170	Ile	Leu	Arg	Thr	Ser 175	Leu
Asp	Leu	Tyr	Ala 180	Asn	Val	Ile	His	Cys 185	Lys	Ser	Leu	Pro	Gly 190	Val	Val
Thr	Arg	His 195	Lys	Asp	Ile	Asp	Ile 200	Leu	Ile	Val	Arg	Glu 205	Asn	Thr	Glu
Gly	Glu 210	Tyr	Ser	Ser	Leu	Glu 215	His	Glu	Ser	Val	Ala 220	Gly	Val	Val	Glu
Ser 225	Leu	Lys	Ile	Ile	Thr 230	Lys	Ala	Lys	Ser	Leu 235	Arg	Ile	Ala	Glu	Туг 240
Ala	Phe	Lys	Leu	Ala 245	Gln	Glu	Ser	Gly	Arg 250	Lys	Lys	Val	Thr	Ala 255	Val
His	Lys	Ala	Asn 260	Ile	Met	Lys	Leu	Gly 265	Asp	Gly	Leu	Phe	Leu 270	Gln	Cys
Cys	Arg	Glu 275	Val	Ala	Ala	Arg	Tyr 280	Pro	Gln	Xaa	Thr	Phe 285	Glu	Asn	Met
Ile	Val 290	Asp	Asn	Thr	Thr	Met 295	Gln	Leu	Val	Xaa	Arg 300	Pro	Gln	Gln	Phe
Asp 305	Val	Met	Val	Met	Pro 310	Asn	Leu	туr	Gly	Asn 315	Ile	Val	Lys	Gln	Cys 320
Leu	Arg	Gly	Xaa	Gly 325	Arg	Gly	Pro	Lys	Leu 330	Val					

<210> 474 <211> 30 <212> PRT <213> Homo sapiens <400> 474 Thr Pro Ile Ser Thr Lys Asn Thr Lys Ile Ser Gln Ala Arg Trp Arg 10 5 Ala His Val Val Pro Ala Thr Arg Glu Ala Asp Ala Glu Glu 25 <210> 475 <211> 124 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (110) <223> Xaa equals any of the naturally occurring L-amino acids <400> 475 Thr Gln Phe Ser Leu Ser Pro Val Glu Thr Ile Tyr Thr Ile Leu Cys 1 5 10 Ile Asn Val Tyr Thr Leu Pro Ile Cys Ile His Ile Tyr Ile Val Tyr 25 20 Ile Leu Tyr Met Tyr Arg Cys Val Tyr Val His Ile Tyr Thr His Ala 40 His Asn Lys Ile Arg Cys Ser Leu Gln Ile Gln Met Leu Ile Thr Lys 55 Pro Asp Ala Thr Gln Thr Ala Ala Glu Glu Thr Arg Leu Asp Ser Cys 70 Asn Arg Ser Gln Lys Ile Lys Thr Ala Thr Cys Ser Asp Phe Gly His 90 Phe Cys Met Phe Ile Lys Asn Gly Phe Val Thr Arg Lys Xaa Arg Thr 100 105 110 Ser Val Ser Glu Lys Gly Arg Trp Gly Glu Pro Ser

120

426

<210> 476 <211> 64

<212> PRT

<213> Homo sapiens

<400> 476

Asn Gly Tyr Leu Val Phe Pro Arg Lys Asn Ser Phe Leu Leu Ile Phe 1 5 10 15

Gly Leu Phe Val Tyr Leu Glu Thr Asn Leu Asp Ser Leu Pro Leu Val 20 25 30

Asp Thr His Ser Lys Arg Thr Leu Leu Ile Lys Thr Val Glu Thr Arg
35 40 45

Asp Gly Gln Val Ile Asn Glu Thr Ser Gln His His Asp Asp Leu Glu 50 60

<210> 477

<211> 107

<212> PRT

<213> Homo sapiens

<400> 477

Val Leu Thr Val Asp Ala Arg Asn His Gly Asp Ser Pro His Ser Pro 1 5 10 15

Asp Met Ser Tyr Glu Ile Met Ser Gln Asp Leu Gln Asp Leu Leu Pro $20 \hspace{1cm} 25 \hspace{1cm} 30 \hspace{1cm}$

Gln Leu Gly Leu Val Pro Cys Val Val Gly His Ser Met Gly Gly
35 40 45

Lys Thr Ala Met Leu Leu Ala Leu Gln Arg Pro Glu Leu Val Glu Arg 50 55 60

Leu Ile Ala Val Asp Ile Ser Pro Val Glu Ser Thr Gly Val Ser His 65 70 75 80

Phe Ala Thr Tyr Val Ala Ala Met Arg Ala Ile Asn Ile Ala Asp Arg 85 90 95

Leu Ala Pro Leu Pro Cys Pro Lys Thr Gly Gly 100 105

<213	0> 4° 1> 21 2> P1	82 RT	sapi	anc											
<220			зарт	2113											
<22	1> S	ITE													
<222	2> (2	281)													
<22	3> Xa	aa e	qual	s any	y of	the	nati	ural	ly o	ccur	ring	L-ai	nino	acio	ds
<400	0> 4'	78													
Arg 1	Glu	Leu	Gly	Gly 5	Thr	Leu	Leu	Ser	Ala 10	Ile	Glu	Val	Glu	Gly 15	Ala
Lys	Met	Gln	Ser 20	Asn	Lys	Thr	Phe	Asn 25	Leu	Glu	Lys	Gln	Asn 30	His	Thr
Pro	Arg	Lys 35	His	His	Gln	His	His 40	His	Gln	Gln	Gln	His 45	His	Gln	Glr
Gln	Gln 50	Gln	Gln	Pro	Pro	Pro 55	Pro	Pro	Ile	Pro	Ala 60	Asn	Gly	Gln	Glr
Ala 65	Ser	Ser	Gln	Asn	Glu 70	Gly	Leu	Thr	Ile	Asp 75	Leu	Lys	Asn	Phe	Arg 80
Lys	Pro	Gly	Glu	Lys 85	Thr	Phe	Thr	Gln	Arg 90	Ser	Arg	Leu	Phe	Val 95	Gly
Asn	Leu	Pro	Pro 100	Asp	Ile	Thr	Glu	Glu 105	Glu	Met	Arg	Lys	Leu 110	Phe	Glu
Lys	Tyr	Gly 115	Lys	Ala	Gly	Glu	Val 120	Phe	Ile	His	Lys	Asp 125	Lys	Gly	Phe
Gly	Phe 130	Ile	Arg	Leu	Glu	Thr 135	Arg	Thr	Leu	Ala	Glu 140	Ile	Ala	Lys	Va]
Glu 145	Leu	Asp	Asn	Met	Pro 150		Arg	Gly	Lys	Gln 155	Leu	Arg	Val	Arg	Phe 160
Ala	Cys	His	Ser	Ala 165	Ser	Leu	Thr	Val	Arg 170	Asn	Leu	Pro	Gln	Tyr 175	Va]
Ser	Asn	Glu	Leu 180	Leu	Glu	Glu	Ala	Phe 185	Ser	Val	Phe	Gly	Gln 190		Glu
Arg	Ala	Val 195	Val	Ile	Val	Asp	Asp 200	Arg	Gly	Arg	Pro	Ser 205	Gly	Lys	Gly

Ile Val Glu Phe Ser Gly Lys Pro Ala Ala Arg Lys Ala Leu Asp Arg

428

Cys Ser Glu Gly Ser Phe Leu Leu Thr Thr Phe Pro Arg Pro Val Thr Val Glu Pro Met Asp Gln Leu Asp Asp Glu Glu Gly Leu Pro Glu Lys 245 250 255 Leu Val Ile Lys Asn Gln Gln Phe His Lys Glu Arg Glu Gln Pro Pro 260 265 Arg Phe Ala Gln Pro Gly Ser Phe Xaa Val 275 280 <210> 479 <211> 289 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (206) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (215) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (218) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (285) <223> Xaa equals any of the naturally occurring L-amino acids Ala Val Pro Val Arg Asn Ser Arg Val Asp Pro Arg Val Arg Val Cys 5 10 Gly Pro Leu Ser Ala Pro Arg Gly Ser Arg Arg Pro Thr Val Pro Gly Thr Pro Ala Cys Leu Ala Arg Pro Ala Ala Gln Gly Phe Ser Ala Ala

429

		35					40					45			
Leu	Pro 50	Val	Arg	Trp	Thr	Gly 55	Arg	Arg	Ala	Gly	Pro 60	Ser	Arg	Pro	Val
Pro 65	Ile	Gly	Thr	Pro	Ser 70	Arg	Ala	Ala	Asp	Pro 75	Ser	Gln	Gly	Glu	Met 80
Ser	Ala	Asp	Ala	Ala 85	Ala	Gly	Ala	Pro	Leu 90	Pro	Arg	Leu	Cys	Cys 95	Leu
Glu	Lys	Gly	Pro 100	Asn	Gly	Tyr	Gly	Phe 105	His	Leu	His	Gly	Glu 110	Lys	Gly
Lys	Leu	Gly 115	Gln	Tyr	Ile	Arg	Leu 120	Val	Glu	Pro	Gly	Ser 125	Pro	Ala	Glu
Lys	Ala 130	Gly	Leu	Leu	Ala	Gly 135	Asp	Arg	Leu	Val	Glu 140	Val	Asn	Gly	Glu
Asn 145	Val	Glu	Lys	Glu	Thr 150	His	Gln	Gln	Val	Val 155	Ser	Arg	Ile	Arg	Ala 160
Ala	Leu	Asn	Ala	Val 165	Arg	Leu	Leu	Val	Val 170	Asp	Pro	Glu	Thr	Asp 175	Glu
Gln	Leu	Gln	Lys 180	Leu	Gly	Val	Gln	Val 185	Arg	Glu	Glu	Leu	Leu 190	Arg	Ala
Gln	Glu	Ala 195	Pro	Gly	Gln	Ala	Glu 200	Pro	Pro	Ala	Ala	Ala 205	Xaa	Val	Gln
Gly	Ala 210	Gly	Asn	Glu	Asn	хаа 215	Pro	Arg	Xaa	Ala	Asp 220	Lys	Ser	His	Pro
Glu 225	Gln	Arg	Glu	Leu	Arg 230	Pro	Arg	Leu	Cys	Thr 235	Met	Lys	Lys	Gly	Pro 240
Ser	Gly	Tyr	Gly	Phe 245	Asn	Leu	His	Ser	Asp 250	Lys	Ser	Lys	Pro	Gly 255	Gln
Phe	Ile	Arg	Ser 260	Val	Asp	Pro	Asp	Ser 265	Pro	Ala	Glu	Ala	Ser 270	Gly	Leu
Arg	Ala	Gln 275	Asp	Arg	Ile	Val	Glu 280	Val	Met	Leu	Leu	Xaa 285	Ser	Leu	Pro

Ile

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<210> 480
<211> 44
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<213> Homo sapiens
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Gly Ser Thr His Ala Ser Gly Arg Asn Glu Gly Pro Pro Ala Lys Thr
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                  5
Lys Ser Trp Val Gly Pro Thr Leu His Phe His Arg Lys Ser Glu His
                                 25
Leu Val Gly Leu Lys Val Leu Cys Cys Phe Arg Leu
                             40
<210> 481
<211> 124
<212> PRT
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Ser Ile Xaa His Xaa Arg Lys Xaa Xaa Xaa Thr Val Arg Ser Asp Ser
                  5
 1
                                     10
                                                          15
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431

Arg Val Asp Pro Arg Ser Asp Asp Phe Thr Pro Leu Glu Ile Leu Trp 20 25 Thr Phe Ser Ile Tyr Leu Glu Ser Val Ala Ile Leu Pro Gln Leu Phe Met Val Ser Lys Thr Gly Glu Ala Glu Thr Ile Thr Ser His Tyr Leu Phe Ala Leu Gly Val Tyr Arg Thr Leu Tyr Leu Phe Asn Trp Ile Trp Arg Tyr His Phe Glu Gly Phe Phe Asp Leu Ile Ala Ile Val Ala Gly 90 Leu Val Gln Thr Val Leu Tyr Cys Asp Phe Phe Tyr Leu Tyr Ile Thr 105 100 Lys Val Leu Lys Gly Lys Lys Leu Ser Leu Pro Ala 115 120 <210> 482 <211> 131 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (122) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (124) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (127) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (131) <223> Xaa equals any of the naturally occurring L-amino acids <400> 482

Cys Ser Ser Arg Gly Ala His His Ser His Cys Asp Arg Leu Pro His

432

10 15 Ser Pro Trp Pro Gly Leu Arg Glu Val Glu Leu Leu Ala Ser Val His 25 Thr Glu Gln Met Glu Glu Glu Leu Ala Leu Gly Pro Arg Gly Gln Gly 40 Gly Ala Ser Leu Ala Gly Arg Asp Gly Arg Ser Ala Gly Ala Gly Ser Tyr Gly Ala Leu Ala Asn Ser Ala Trp Gly Gly Pro Arg Lys Val Ala 70 75 Ser Ala Ser Ala Ala Ala Ser Thr Leu Ser Glu Pro Pro Arg Arg Thr 85 90 Gln Glu Ser Arg Thr Arg Thr Arg Ala Leu Gly Leu Pro Thr Leu Pro Met Glu Lys Leu Ala Ala Ser Asn Arg Xaa Pro Xaa Gly Leu Xaa Gly 120 Pro Gly Xaa 130 <210> 483 <211> 221 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (168) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (174) <223> Xaa equals any of the naturally occurring L-amino acids Lys Lys Pro Pro Ile Thr His Pro Ser Thr Pro Ala Glu Glu Thr Tyr . 5 Asn Leu Gly Arg Gln Val Leu Pro Leu Ser Ala Val Thr Tyr Phe Gln 20 25

Lys Ser Gly Pro Gly Leu Pro Ala Pro Ala Thr Gln Ser Ala Ser

35 40 45 Val Ala Gly Thr Leu Gln Asn Ser Leu Cys Ser Gln Val Thr Lys Lys 55 Lys Arg Ala Asn Met Leu Val Leu Leu Ala Gly Ile Phe Val Val His 70 75 65 Ile Ala Thr Val Ile Met Leu Phe Val Ser Thr Ile Ala Asn Val Trp 85 90 Leu Val Ser Asn Thr Val Asp Ala Ser Val Gly Leu Trp Lys Asn Cys 105 Thr Asn Ile Ser Cys Ser Asp Ser Leu Ser Tyr Ala Ser Glu Asp Ala 120 Leu Lys Thr Val Gln Ala Phe Met Ile Leu Ser Ile Ile Phe Cys Val Ile Ala Leu Leu Val Phe Val Phe Gln Leu Phe Thr Met Glu Lys Gly 145 155 150 Asn Arg Phe Phe Leu Ser Gly Xaa Thr Thr Leu Val Cys Xaa Leu Cys 170 165 Ile Leu Val Gly Cys Pro Ser Thr Leu Val Ile Met Arg Ile Val Met 180 185 Glu Arg Ile Cys Thr Thr Ala Ile Pro Thr Ser Trp Ala Gly Ser Ala 200 195 Ser Ala Ser Ala Ser Ser Ser Ala Phe Ser Ile Trp Ser 215 <210> 484 <211> 382 <212> PRT

<213> Homo sapiens

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Cys Trp Ser Pro Ser Xaa Asn Ser Phe His Val Phe Asp Gln Gly Gln
                                 25
Phe Ala Lys Glu Val Leu Pro Lys Tyr Phe Lys His Asn Asn Met Ala
         35
                             40
                                                 45
Ser Phe Val Arg Gln Xaa Asn Met Tyr Gly Phe Arg Lys Val Val His
Ile Glu Gln Gly Xaa Leu Val Lys Pro Glu Arg Asp Asp Thr Glu Phe
                     70
                                         75
Gln His Pro Cys Phe Leu Arg Gly Gln Glu Gln Leu Leu Glu Asn Ile
                 85
                                     90
Lys Arg Lys Val Thr Ser Val Ser Thr Leu Lys Ser Glu Asp Ile Lys
                                105
Ile Arg Gln Asp Ser Val Thr Lys Leu Leu Thr Asp Val Gln Leu Met
                            120
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Lys	Gly 130	Lys	Gln	Glu	Cys	Met 135	Asp	Ser	Lys	Leu	Leu 140	Ala	Met	Lys	His
Glu 145	Asn	Glu	Ala	Leu	Trp 150	Arg	Glu	Val	Ala	Ser 155	Leu	Arg	Gln	Lys	His 160
Ala	Gln	Gln	Gln	Lys 165	Val	Val	Asn	Lys	Leu 170	Ile	Gln	Phe	Leu	Ile 175	Ser
Leu	Val	Gln	Ser 180	Asn	Arg	Ile	Leu	Gly 185	Val	Lys	Arg	Lys	Ile 190	Pro	Leu
Met	Leu	Asn 195	Asp	Ser	Gly	Ser	Ala 200	His	Ser	Met	Pro	Lys 205	туr	Ser	Arg
Gln	Phe 210	Ser	Leu	Glu	His	Val 215	His	Gly	Ser	Gly	Pro 220	туг	Ser	Ala	Pro
Ser 225	Pro	Ala	Tyr	Ser	Ser 230	Ser	Ser	Leu	Tyr	Ala 235	Pro	Asp	Ala	Val	Ala 240
Ser	Ser	Gly	Pro	Ile 245	Ile	Ser	Asp	Ile	Thr 250	Glu	Leu	Ala	Pro	Ala 255	Ser
Pro	Met	Ala	Ser 260	Pro	Gly	Gly	Ser	11e 265	Asp	Glu	Arg	Pro	Leu 270	Ser	Ser
Ser	Pro	Leu 275	Val	Arg	Val	Lys	Glu 280	Glu	Pro	Pro	Ser	Pro 285	Pro	Xaa	Ser
Pro	Arg 290	Val	Glu	Glu	Ala	Ser 295	Pro	Gly	Xaa	Pro	Ser 300	Ser	Val	Asp	Thr
Leu 305	Leu	Ser	Pro	Thr	Ala 310	Leu	Ile	Asp	Ser	11e 315	Leu	Arg	Glu	Ser	Glu 320
Pro	Ala	Pro	Xaa	Ser 325	Val	Thr	Ala	Leu	Thr 330	Asp	Ala	Arg	Gly	His 335	Thr
Asp	Thr	Glu	Gly 340	Arg	Pro	Pro	Ser	Pro 345	Pro	Pro	Thr	Ser	Thr 350	Pro	Glu
Lys	Cys	Leu 355	Ser	Val	Xaa	Ala	Trp 360	Thr	Arg	Met	Ser	Ser 365	Val	Thr	Thr
Trp	Met 370	Leu	Trp	Thr	Pro	Thr 375	Trp	Ile	Thr	Cys	Arg 380	Pro	Суѕ		

<211> 416 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (399) <223> Xaa equals any of the naturally occurring L-amino acids <400> 485 Pro Ser Val Ala Asn Val Gly Ser His Cys Asp Leu Ser Leu Lys Ile 10 Pro Glu Ile Ser Ile Gln Asp Met Thr Ala Gln Val Thr Ser Pro Ser Gly Lys Thr His Glu Ala Glu Ile Val Glu Gly Glu Asn His Thr Tyr 35 40 Cys Ile Arg Phe Val Pro Ala Glu Met Gly Thr His Thr Val Ser Val Lys Tyr Lys Gly Gln His Val Pro Gly Ser Pro Phe Gln Phe Thr Val 70 75 Gly Pro Leu Gly Glu Gly Gly Ala His Lys Val Arg Ala Gly Gly Pro Gly Leu Glu Arg Ala Glu Ala Gly Val Pro Ala Glu Phe Ser Ile Trp 105 Thr Arg Glu Ala Gly Ala Gly Gly Leu Ala Ile Ala Val Glu Gly Pro 115 120 Ser Lys Ala Glu Ile Ser Phe Glu Asp Arg Lys Asp Gly Ser Cys Gly 135 Val Ala Tyr Val Val Gln Glu Pro Gly Asp Tyr Glu Val Ser Val Lys 150 155 Phe Asn Glu Glu His Ile Pro Asp Ser Pro Phe Val Val Pro Val Ala Ser Pro Ser Gly Asp Ala Arg Arg Leu Thr Val Ser Ser Leu Gln Glu 185 Ser Gly Leu Lys Val Asn Gln Pro Ala Ser Phe Ala Val Ser Leu Asn 195 200 Gly Ala Lys Gly Ala Ile Asp Ala Lys Val His Ser Pro Ser Gly Ala

215

220

437

Leu Glu Glu Cys Tyr Val Thr Glu Ile Asp Gln Asp Lys Tyr Ala Val 235 230 225 Arg Phe Ile Pro Arg Glu Asn Gly Val Tyr Leu Ile Asp Val Lys Phe 245 250 Asn Gly Thr His Ile Pro Gly Ser Pro Phe Lys Ile Arg Val Gly Glu 265 Pro Gly His Gly Gly Asp Pro Gly Leu Val Ser Ala Tyr Gly Ala Gly 280 Leu Glu Gly Gly Val Thr Gly Asn Pro Ala Glu Phe Val Val Asn Thr 295 Ser Asn Ala Gly Ala Gly Ala Leu Ser Val Thr Ile Asp Gly Pro Ser 305 310 315 Lys Val Lys Met Asp Cys Gln Glu Cys Pro Glu Gly Tyr Arg Val Thr 325 330 Tyr Thr Pro Met Ala Pro Gly Ser Tyr Leu Ile Ser Ile Lys Tyr Gly 345 Gly Pro Tyr His Ile Gly Gly Ser Pro Phe Lys Ala Lys Val Thr Gly 360 Pro Arg Leu Val Ser Asn His Ser Leu His Glu Thr Ser Ser Val Phe 375 380 Val Asp Ser Leu Thr Lys Ala Thr Cys Ala Pro Gln His Gly Xaa Pro 395 385 390 Gly Pro Gly Pro Ala Asp Ala Ser Lys Val Val Ala Lys Gly Trp Gly 410 405

<210> 486

<211> 46

<212> PRT

<213> Homo sapiens

<400> 486

Phe Val Thr Ser Gly Lys Ile Ser Leu Tyr Val Tyr Ile Leu Thr Ile
1 5 10 15

Ile Leu Phe Leu Ile Phe Phe Asn Lys Asp Ile Leu Arg Tyr
35 40 45

<210> 487

<211> 162

<212> PRT

<213> Homo sapiens

<400> 487

Leu Gly Val Ala Leu Gly Ala Val Pro Lys Leu His Leu Gly Val Leu 1 5 10 15

Val Ser Thr Gly Leu Arg Thr Ala Val Gly Ser Pro Arg Leu Pro Pro 20 25 30

Thr Ala Leu Gly Ala Ala Tyr Gly Thr Ala Lys Ser Gly Thr Gly Ile $35 \hspace{1cm} 45$

Ala Ala Met Ser Val Met Arg Pro Glu Gln Ile Met Lys Ser Ile Ile
50 60

Pro Val Val Met Ala Gly Ile Ile Ala Ile Tyr Gly Leu Val Val Ala 65 70 75 80

Val Leu Ile Ala Asn Ser Leu Asn Asp Asp Ile Ser Leu Tyr Lys Ser 85 90 95

Phe Leu Gln Leu Gly Ala Gly Leu Ser Val Gly Leu Ser Gly Leu Ala 100 105 110

Ala Gly Phe Ala Ile Gly Ile Val Gly Asp Ala Gly Val Arg Gly Thr 115 120 125

Ala Gln Gln Pro Arg Leu Phe Val Gly Met Ile Leu Ile Leu Ile Phe 130 135 140

Thr Lys

<210> 488

<211> 114

439

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<212> PRT
<213> Homo sapiens
<220>
<221> SITE
<222> (95)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (111)
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<220>
<221> SITE
<222> (113)
<223> Xaa equals any of the naturally occurring L-amino acids
<400> 488
Gln Ala Leu Arg Pro Gly Ser Phe Arg Gly Thr Gly Arg Lys Arg Glu
                                    10
Arg Glu Arg Glu Arg Met Ser Leu Ser Asp Trp His Leu Ala Val Lys
                        25
Leu Ala Asp Gln Pro Leu Ala Pro Lys Ser Ile Leu Gln Leu Pro Glu
        35
                            40
Ser Glu Leu Gly Glu Tyr Ser Leu Gly Gly Tyr Ser Ile Ser Phe Leu
                        55
Lys Gln Leu Ile Ala Gly Lys Leu Gln Glu Ser Val Pro Asp Pro Glu
                  70
Leu Ile Asp Leu Ile Tyr Cys Gly Arg Lys Leu Lys Asp Asp Xaa Thr
                                    90
Leu Thr Ser Thr Val Phe Asn Leu Ala Pro His Pro Cys Ser Xaa Glu
                              105
Xaa Leu
```

<210> 489

<211> 149

<212> PRT

<213> Homo sapiens

<220>

440

<221> SITE <222> (121) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (142) <223> Xaa equals any of the naturally occurring L-amino acids Ser Thr His Ala Ser Glu Asp Val Leu Ala Ala Pro Ser Gly Cys Arg 5 10 Ala Ser Arg Pro Pro Thr Ser Gly Arg Glu Gln Phe Trp Ala Arg Gly Leu Ala Ala Ala Asp Met Thr Lys Gly Leu Val Leu Gly Ile Tyr Ser 35 40 45 Lys Asp Lys Glu Asp Asp Val Pro Gln Phe Thr Ser Ala Gly Glu Asn Phe Asp Lys Leu Val Ser Gly Lys Leu Arg Glu Ile Leu Asn Ile Ser Gly Pro Pro Leu Lys Ala Gly Lys Thr Arg Thr Phe Tyr Gly Leu His 85 90 Glu Asp Phe Pro Ser Val Val Val Gly Leu Gly Arg Lys Ala Ala 105 Gly Val Asp Asp Gln Glu Asn Trp Xaa Glu Gly Lys Glu Asn Ile Arg 115 120 125 Val Ala Met Gln Arg Gly Ala Gly Arg Phe Gln Asp Leu Xaa Ile Ser 135 Ser Val Glu Gly Gly 145 <210> 490 <211> 527 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (311)

<223> Xaa equals any of the naturally occurring L-amino acids

<400)> 49	90													
Arg 1	Arg	Arg	Ser	Arg 5	Gly	Leu	Ile	Pro	Gly 10	Arg	Ala	Pro	Gly	Arg 15	Arg
Arg	Pro	Arg	Ala 20	His	Glu	Val	Ala	Arg 25	Ala	Pro	Pro	Pro	Ile 30	Ala	Met
Asp	Arg	Met 35	Lys	Lys	Ile	Lys	Arg 40	Gln	Leu	Ser	Met	Thr 45	Leu	Arg	Gly
Gly	Arg 50	Gly	Ile	Asp	Lys	Thr 55	Asn	Gly	Ala	Pro	Glu 60	Gln	Ile	Gly	Leu
Asp 65	Glu	Ser	Gly	Gly	Gly 70	Gly	Gly	Ser	Asp	Pro 75	Gly	Glu	Ala	Pro	Thr 80
Arg	Ala	Ala	Pro	Gly 85	Glu	Leu	Arg	Ser	Ala 90	Arg	Gly	Pro	Leu	Ser 95	Ser
Ala	Pro	Glu	Ile 100	Val	His	Glu	Asp	Leu 105	Lys	Met	Gly	Ser	Asp 110	Gly	Glu
Ser	Asp	Gln 115	Ala	Ser	Ala	Thr	Ser 120	Ser	Asp	Glu	Val	Gln 125	Ser	Pro	Val
Arg	Val 130	Arg	Met	Arg	Asn	His 135	Pro	Pro	Arg	Lys	Ile 140	Ser	Thr	Glu	Asp
Ile 145	Asn	Lys	Arg	Leu	Ser 150	Leu	Pro	Ala	Asp	Ile 155	Arg	Leu	Pro	Glu	Gly 160
Tyr	Leu	Glu	Lys	Leu 165	Thr	Leu	Asn	Ser	Pro 170	Ile	Phe	Asp	Lys	Pro 175	Leu
Ser	Arg	Arg	Leu 180	Arg	Arg	Val	Ser	Leu 185	Ser	Glu	Ile	Gly	Phe 190	Gly	Lys
Leu	Glu	Thr 195	Tyr	Ile	Lys	Leu	Asp 200	Lys	Leu	Gly	Glu	Gly 205	Thr	Tyr	Ala
Thr	Val 210	Tyr	Lys	Gly	Lys	Ser 215	Lys	Leu	Thr	Asp	Asn 220	Leu	Val	Ala	Leu
Lys 225	Glu	Ile	Arg	Leu	Glu 230	His	Glu	Glu	Gly	Ala 235	Pro	Cys	Thr	Ala	Ile 240
Arg	Glu	Val	Ser	Leu 245	Leu	Lys	Asp	Leu	Lys 250	His	Ala	Asn	Ile	Val 255	Thr
	uic	Acn	Tla	Tlo	wi e	Th-	Glu	Tue	Sar	T AU	Thr	T.OII	Va 1	Dho	Glu

			260					265					270		
Tyr	Leu	Asp 275	Lys	Asp	Leu	Lys	Gln 280	Tyr	Leu	Asp	Asp	Cys 285	Gly	Asn	Ile
Ile	Asn 290	Met	His	Asn	Val	Lys 295	Leu	Phe	Leu	Phe	Gln 300	Leu	Leu	Arg	Gly
Leu 305	Ala	Tyr	Cys	His	Arg 310	Xaa	Lys	Val	Leu	His 315	Arg	Asp	Leu	Lys	Pro 320
Gln	Asn	Leu	Leu	11e 325	Asn	Glu	Arg	Gly	Glu 330	Leu	Lys	Leu	Ala	Asp 335	Phe
Gly	Leu	Ala	Arg 340	Ala	Lys	Ser	Ile	Pro 345	Thr	Lys	Thr	туг	Ser 350	Asn	Glu
Val	Val	Thr 355	Leu	Trp	Tyr	Arg	Pro 360	Pro	Asp	Ile	Leu	Leu 365	Gly	Ser	Thr
Asp	Туг 370	Ser	Thr	Gln	Ile	Asp 375	Met	Trp	Gly	Val	Gly 380	Cys	Ile	Phe	Tyr
Glu 385	Met	Ala	Thr	Gly	Arg 390	Pro	Leu	Phe	Pro	Gly 395	Ser	Thr	Val	Glu	Glu 400
Gln	Leu	His	Phe	Ile 405	Phe	Arg	Ile	Leu	Gly 410	Thr	Pro	Thr	Glu	Glu 415	Thr
Trp	Pro	Gly	11e 420	Leu	Ser	Asn	Glu	Glu 425	Phe	Lys	Thr	Tyr	Asn 430	Tyr	Pro
Lys	Tyr	Arg 435	Ala	Glu	Ala	Leu	Leu 440	Ser	His	Ala	Pro	Arg 445	Leu	Asp	Ser
Asp	Gly 450	Ala	Asp	Leu	Leu	Thr 455	Lys	Leu	Leu	Gln	Phe 460	Glu	Gly	Arg	Asn
Arg 465	Ile	Ser	Ala	Glu	Asp 470	Ala	Met	Lys	His	Pro 475	Phe	Phe	Leu	Ser	Leu 480
Gly	Glu	Arg	Ile	His 485	Lys	Leu	Pro	Asp	Thr 490	Thr	Ser	Ile	Phe	Ala 495	Leu
Lys	Glu	Ile	Gln 500	Leu	Gln	Lys	Glu	Ala 505	Ser	Leu	Arg	Ser	Ser 510	Ser	Met
Pro	Asp	Ser 515	Gly	Arg	Pro	Ala	Phe 520	Arg	Val	Val	Asp	Thr 525	Glu	Phe	

443

<210> 491 <211> 125 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (125) <223> Xaa equals any of the naturally occurring L-amino acids Cys Thr Arg Ala His Pro Lys Asn Leu Val Glu Lys Gly Ile Leu Thr 10 Thr Glu Lys Gln Asn Phe Leu Leu Phe Asp Met Thr Thr His Pro Val 25 Thr Asn Thr Thr Glu Lys Gln Arg Leu Val Lys Lys Leu Gln Asp Ser 40 Val Leu Glu Arg Trp Val Asn Asp Pro Gln Arg Met Asp Lys Arg Thr 55 Leu Ala Leu Leu Val Leu Ala His Ser Ser Asp Val Leu Glu Asn Val 70 75 Phe Ser Ser Leu Thr Asp Asp Lys Tyr Asp Val Ala Met Asn Arg Ala 90 85 Lys Asp Leu Val Glu Leu Asp Pro Glu Val Glu Gly Thr Lys Pro Ser Ala Thr Glu Met Ile Trp Ala Val Leu Ala Ala Phe Xaa 115 120 <210> 492 <211> 53 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (3) <223> Xaa equals any of the naturally occurring L-amino acids

<220> <221> SITE <222> (49)

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<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (51)
<223> Xaa equals any of the naturally occurring L-amino acids
<400> 492
Val Ser Xaa Ser Ile Leu Ala Leu Leu Phe Asn Thr Asp Ala Leu Phe
                  5
                                      10
Ser Arg Val Tyr Glu Ser Leu Ser Asp Asn His Gly Leu Gln Glu Gln
Thr Val Glu Lys Leu Phe Phe Gln Trp Lys Ser Trp Val Gln Glu Met
         35
                             40
Xaa Gly Xaa Leu Lys
     50
<210> 493
<211> 82
<212> PRT
<213> Homo sapiens
<220>
<221> SITE
<222> (60)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (67)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
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<220>
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<400> 493 Pro Gly Phe Phe Gln Met Leu Val His Thr Tyr Ser Ser Met Asp Arg His Asp Gly Val Pro Ser His Ser Ser Arg Leu Ser Gln Leu Gly Ser Val Ser Gln Gly Pro Tyr Ser Ser Ala Pro Pro Leu Ser His Thr Pro Ser Ser Asp Phe Gln Pro Pro Tyr Phe Pro Xaa Pro Tyr Gln Pro 55 Leu Pro Xaa Xaa Gln Ser Gln Asp Pro Tyr Ser His Val Xaa Xaa Pro 75 Tyr Pro <210> 494 <211> 290 <212> PRT .<213> Homo sapiens <400> 494 Tyr Lys Asp Trp Leu Thr Lys Met Ser Gly Lys His Asp Val Gly Ala Tyr Met Leu Met Tyr Lys Gly Ala Asn Arg Thr Glu Thr Val Thr Ser Phe Arg Lys Arg Glu Ser Lys Val Pro Ala Asp Leu Leu Lys Arg Ala 40 Phe Val Arg Met Ser Thr Ser Pro Glu Ala Phe Leu Ala Leu Arg Ser 55 His Phe Ala Ser Ser His Ala Leu Ile Cys Ile Ser His Trp Ile Leu 65 Gly Ile Gly Asp Arg His Leu Asn Asn Phe Met Val Ala Met Glu Thr 90

Gly Gly Val Ile Gly Ile Asp Phe Gly His Ala Phe Gly Ser Ala Thr

Gln Phe Leu Pro Val Pro Glu Leu Met Pro Phe Arg Leu Thr Arg Gln

125

120

446

Phe Ile Asn Leu Met Leu Pro Met Lys Glu Thr Gly Leu Met Tyr Ser Ile Met Val His Ala Leu Arg Ala Phe Arg Ser Asp Pro Gly Leu Leu Thr Asn Thr Met Asp Val Phe Val Lys Glu Pro Ser Phe Asp Trp Lys 170 Asn Phe Glu Gln Lys Met Leu Lys Lys Gly Gly Ser Trp Ile Gln Glu 180 185 Ile Asn Val Ala Glu Lys Asn Trp Tyr Pro Arg Gln Lys Ile Cys Tyr 200 Ala Lys Arg Lys Leu Ala Gly Ala Asn Pro Ala Val Ile Thr Cys Asp 210 215 220 Glu Leu Leu Gly His Glu Lys Ala Pro Ala Phe Arg Asp Tyr Val Ala Val Ala Arg Gly Ser Lys Asp His Asn Ile Arg Ala Gln Glu Pro 250 Glu Ser Gly Leu Ser Glu Glu Thr Gln Val Lys Cys Leu Met Asp Gln 260 265 Ala Thr Asp Pro Asn Ile Leu Gly Arg Thr Trp Glu Gly Trp Glu Pro 280 Trp Met 290 <210> 495 <211> 156 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (148) <223> Xaa equals any of the naturally occurring L-amino acids Cys Gln Ser His Pro Leu Pro Gly Gly Pro Ala Cys Pro Cys Leu Ala 10 Cys His Ile Thr Leu Leu Phe Gly Arg Pro Trp Leu Ile Lys Glu Val

447

20 25 30 Leu Val Val Ser Gln Ala Lys Trp Asn Leu Glu Thr Val Lys Lys Val 40 Gln Ile Thr Leu Asn Cys Ile Gln Glu Val His Phe Phe Pro Ile Val 55 Arg Gly Ser Trp Ser Leu Arg Asp Ala Arg Leu Glu Ser Asp Tyr Ile Ile Ile Gln Asn Gly Asn Ser Gln Gly Asn Ala Phe Phe His Phe Ile Arg Phe Phe Tyr Pro His Cys Thr Pro Ser Pro Ser Pro Leu Pro Ile 100 Trp Met Ala Ser Gln Lys Leu Gly Pro Ser Pro Pro Cys Leu Gly Gly 120 Gly Gln Ser Pro Leu Thr Ala Glu Ala Ala Leu Leu Ser Ser Ala Val 135 140 Leu Pro Leu Xaa Lys Cys Leu Gln Arg Val Met Ser 150 <210> 496 <211> 251 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (42) <223> Xaa equals any of the naturally occurring L-amino acids <400> 496 Glu Glu Leu Leu Arg Ala Gln Glu Ala Pro Gly Gln Ala Glu Pro Pro 10 Ala Ala Ala Glu Val Gln Gly Ala Gly Asn Glu Asn Glu Pro Arg Glu Ala Asp Lys Ser His Pro Glu Gln Arg Xaa Leu Arg Pro Arg Leu Cys

Thr Met Lys Lys Gly Pro Ser Gly Tyr Gly Phe Asn Leu His Ser Asp

448

Lys Ser Lys Pro Gly Gln Phe Ile Arg Ser Val Asp Pro Asp Ser Pro 70 Ala Glu Ala Ser Gly Leu Arg Ala Gln Asp Arg Ile Val Glu Val Asn 85 90 Gly Val Cys Met Glu Gly Lys Gln His Gly Asp Val Val Ser Ala Ile 105 Arg Ala Gly Gly Asp Glu Thr Lys Leu Leu Val Val Asp Arg Glu Thr 120 Asp Glu Phe Phe Lys Lys Cys Arg Val Ile Pro Ser Gln Glu His Leu 130 135 Asn Gly Pro Leu Pro Val Pro Phe Thr Asn Gly Glu Ile Gln Lys Glu Asn Ser Arg Glu Ala Leu Ala Glu Ala Ala Leu Glu Ser Pro Arg Pro 165 170 175 Ala Leu Val Arg Ser Ala Ser Ser Asp Thr Ser Glu Glu Leu Asn Ser 180 185 Gln Asp Ser Pro Pro Lys Gln Asp Ser Thr Ala Pro Ser Ser Thr Ser 200 205 Ser Ser Asp Pro Ile Leu Asp Phe Asn Ile Ser Leu Ala Met Ala Lys 210 215 Glu Arg Ala His Gln Lys Arg Ser Ser Lys Arg Ala Pro Gln Met Asp Trp Ser Lys Lys Asn Glu Leu Phe Ser Asn Leu 245

<210> 497

<211> 48

<212> PRT

<213> Homo sapiens

<400> 497

Asn Gly Ala Glu Ala Val Ser Thr Glu Ala Lys Met Thr Ala Phe Pro 1 5 10

Asp Trp Pro Trp Leu Phe His Thr Leu Cys Asp Pro Cys Pro Met Thr 20 25 30

Leu Trp Leu Thr Leu Pro Glu Ala Met Thr Thr Ala Ala Phe Cys His

449

35 40 45

<210> 498 <211> 373 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (337) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (372) <223> Xaa equals any of the naturally occurring L-amino acids <400> 498 Gly Thr Arg Gly Ser Arg Ala Ser Gly Val Cys Ala Arg Gly Cys Leu 10 Asp Ser Ala Gly Pro Trp Thr Met Ser Arg Ala Leu Arg Pro Pro Leu 25 Pro Pro Leu Cys Phe Phe Leu Leu Leu Leu Ala Ala Gly Ala Arg 35 40 45 Ala Gly Gly Tyr Glu Thr Cys Pro Thr Val Gln Pro Asn Met Leu Asn 55 Val His Leu Leu Pro His Thr His Asp Asp Val Gly Trp Leu Lys Thr 70 75 Val Asp Gln Tyr Phe Tyr Gly Ile Lys Asn Asp Ile Gln His Ala Gly Val Gln Tyr Ile Leu Asp Ser Val Ile Ser Ala Leu Leu Ala Asp Pro 100 105 Thr Arg Arg Phe Ile Tyr Val Glu Ile Ala Phe Phe Ser Arg Trp Trp 115 120 His Gln Gln Thr Asn Ala Thr Gln Glu Val Val Arg Asp Leu Val Arg 130 135

Gln Gly Arg Leu Glu Phe Ala Asn Gly Gly Trp Val Met Asn Asp Glu

145					150					155					160
Ala	Ala	Thr	His	Tyr 165	Gly	Ala	Ile	Val	Asp 170	Gln	Met	Thr	Leu	Gly 175	Leu
Arg	Phe	Leu	Glu 180	Asp	Thr	Phe	Gly	Asn 185	Asp	Gly	Arg	Pro	Arg 190	Val	Ala
Trp	His	Ile 195	Asp	Pro	Phe	Gly	His 200	Ser	Arg	Glu	Gln	Ala 205	Ser	Leu	Phe
Ala	Gln 210	Met	Gly	Phe	Asp	Gly 215	Phe	Phe	Phe	Gly	Arg 220	Leu	Asp	Tyr	Gln
Asp 225	Lys	Trp	Val	Arg	Met 230	Gln	Lys	Leu	Glu	Met 235	Glu	Gln	Val	Trp	Arg 240
Ala	Ser	Thr	Ser	Leu 245	Lys	Pro	Pro	Thr	Ala 250	Asp	Leu	Phe	Thr	Gly 255	Val
Leu	Pro	Asn	Gly 260	Tyr	Asn	Pro	Pro	Arg 265	Asn	Leu	Cys	Trp	Asp 270	Val	Leu
Cys	Val	Asp 275	Gln	Pro	Leu	Val	Glu 280	Asp	Pro	Arg	Ser	Pro 285	Glu	Tyr	Asn
Ala	Lys 290	Glu	Leu	Val	Asp	Туг 295	Phe	Leu	Asn	Val	Ala 300	Thr	Ala	Gln	Gly
Arg 305	Tyr	Tyr	Arg	Thr	Asn 310	His	Thr	Val	Met	Thr 315	Met	Gly	Ser	Asp	Phe 320
Gln	туг	Glu	Asn	Ala 325	Asn	Met	Trp	Phe	Lys 330	Asn	Leu	Asp	Lys	Leu 335	Ile
Xaa	Leu	Val	Asn 340	Ala	Gln	Gly	Lys	Arg 345	Lys	Gln	Cys	Pro	Cys 350	Ser	Leu
Leu	His	Pro 355	Arg	Leu	Leu	Pro	Leu 360	Gly	Ala	Glu	Gln	Gly 365	Gln	Pro	His
Leu	Val	Ser	Xaa	Thr											

<210> 499

<211> 238

<212> PRT

<213> Homo sapiens

451

<400> 499

Ala Leu Pro Gly Pro Asp Trp His Gly Ala Gly Ala Ala Asp Arg Gly
1 5 10 15

Pro Ala Ala Pro Pro Arg Pro Gly Pro Cys Ala Tyr Ala Ala His Gly

Arg Gly Ala Leu Ala Glu Ala Ala Arg Arg Cys Leu His Asp Ile Ala 35 40 45

Leu Ala His Arg Ala Ala Thr Ala Ala Arg Pro Pro Ala Pro Pro Pro 50 55 60

Ala Pro Gln Pro Pro Ser Pro Thr Pro Ser Pro Pro Arg Pro Thr Leu 65 70 75 80

Ala Arg Glu Asp Asn Glu Glu Asp Glu Asp Glu Pro Thr Glu Thr Glu 85 90 95

Thr Ser Gly Glu Gln Leu Gly Ile Ser Asp Asn Gly Gly Leu Phe Val

Met Asp Glu Asp Ala Thr Leu Gln Asp Leu Pro Pro Phe Cys Glu Ser 115 120 125

Asp Pro Glu Ser Thr Asp Asp Gly Ser Leu Ser Glu Glu Thr Pro Ala 130 135 140

Gly Pro Pro Thr Cys Ser Val Pro Pro Ala Ser Ala Leu Pro Thr Gln 145 150 155 160

Gln Tyr Ala Lys Ser Leu Pro Val Ser Val Pro Val Trp Gly Phe Lys 165 170 175

Glu Lys Arg Thr Glu Ala Arg Ser Ser Asp Glu Glu Asn Gly Pro Pro 180 185 190

Ser Ser Pro Asp Leu Asp Arg Ile Ala Ala Ser Met Arg Ala Leu Val 195 200 205

Leu Arg Glu Ala Glu Asp Thr Gln Val Phe Gly Asp Leu Pro Arg Pro 210 215 220

Arg Leu Asn Thr Ser Asp Phe Gln Lys Leu Lys Arg Lys Tyr 225 230 235

<210> 500

<211> 198

<212> PRT

452

<213> Homo sapiens <220> <221> SITE <222> (94) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (156) <223> Xaa equals any of the naturally occurring L-amino acids <400> 500 Asn Ser Ala Glu Leu Ser Pro Gly Leu Cys Ser Pro Thr Pro Thr Glu Ala Arg Ala Gly Asp Ala Gly Pro Ala Ala Arg Ser Arg Lys Gln Asn Pro Gln Ser Pro Pro Cys Cys Cys Val Asp Asp Thr Trp Ala Gln Ala 40 Glu Val Gly Pro Val Thr Ser Cys Thr Gly Phe Val Glu Gly Ser Ser 55 Arg Thr Gly Gly Met Gly Ser Ala Cys Ile Lys Val Thr Lys Tyr Phe 65 70 Leu Phe Leu Phe Asn Leu Ile Phe Phe Ile Leu Gly Ala Xaa Ile Leu Gly Phe Gly Val Trp Ile Leu Ala Asp Lys Ser Ser Phe Ile Ser Val Leu Gln Thr Ser Ser Ser Leu Arg Met Gly Ala Tyr Val Phe Ile 120 Gly Val Gly Ala Val Thr Met Leu Met Gly Phe Leu Gly Cys Ile Gly 135 Ala Val Asn Glu Val Arg Cys Leu Leu Gly Leu Xaa Phe Ala Phe Leu 145 150 155 Leu Leu Ile Leu Ile Ala Gln Val Thr Ala Gly Ala Leu Phe Tyr Phe 170 Asn Met Gly Lys Val Ser Pro Ser Leu Pro Pro Ser Ser Leu Gly Trp 185 Thr Asn His Gly Gly Asp

453

<210> 501 <211> 169 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (165) <223> Xaa equals any of the naturally occurring L-amino acids Ser Ser Ala Ser Thr Asn Met Ser Arg Gly Ser Ser Ala Gly Phe Asp 10 Arg His Ile Thr Ile Phe Ser Pro Glu Gly Arg Leu Tyr Gln Val Glu 25 Tyr Ala Phe Lys Ala Ile Asn Gln Gly Gly Leu Thr Ser Val Ala Val Arg Gly Lys Asp Cys Ala Val Ile Val Thr Gln Lys Lys Val Pro Asp Lys Leu Leu Asp Ser Ser Thr Val Thr His Leu Phe Lys Ile Thr Glu 70 75 Asn Ile Gly Cys Val Met Thr Gly Met Thr Ala Asp Ser Arg Ser Gln 85 90 Val Gln Arg Ala Arg Tyr Glu Ala Ala Asn Trp Lys Tyr Lys Tyr Gly 105 Tyr Glu Ile Pro Val Asp Met Leu Cys Lys Arg Ile Ala Asp Ile Ser 120 Gln Val Tyr Thr Gln Asn Ala Glu Met Arg Pro Leu Gly Cys Cys Met Ile Leu Ile Gly Ile Asp Glu Glu Gln Gly Pro Gln Val Tyr Lys Cys 155 Asp Pro Ala Gly Xaa Tyr Cys Gly Val

<210> 502 <211> 507

<212> PRT	
<213> Homo sapiens	
<220>	
<221> SITE	
<222> (10)	
<223> Xaa equals any of the naturally occurring L-amino acid	5
<220>	
<221> SITE	
<222> (361)	
<223> Xaa equals any of the naturally occurring L-amino acid	5
<220>	
<221> SITE	
<222> (461)	
<223> Xaa equals any of the naturally occurring L-amino acid	5
<400> 502	
Val Arg Gln Leu Cys Arg Pro Ala Glu Xaa Asp Ser Val Met Ala	Glu
1 5 10 15	
Gln Val Ala Leu Ser Arg Thr Gln Val Cys Gly Ile Leu Arg Glu	Glu
20 25 30	
Leu Phe Gln Gly Asp Ala Phe His Gln Ser Asp Thr His Ile Phe	Ile
35 40 45	
Ile Met Gly Ala Ser Gly Asp Leu Ala Lys Lys Lys Ile Tyr Pro	Thr
50 55 60	
Ile Trp Trp Leu Phe Arg Asp Gly Leu Leu Pro Glu Asn Thr Phe	
65 70 75	80
Val Gly Tyr Ala Arg Ser Arg Leu Thr Val Ala Asp Ile Arg Lys	Gln
85 90 95	
Ser Glu Pro Phe Phe Lys Ala Thr Pro Glu Glu Lys Leu Lys Leu	Glu
100 105 110	
Asp Phe Phe Ala Arg Asn Ser Tyr Val Ala Gly Gln Tyr Asp Asp	Ala
115 120 125	
Ala Ser Tyr Gln Arg Leu Asn Ser His Met Asn Ala Leu His Leu	Gly
130 135 140	
	_
Ser Gln Ala Asn Arg Leu Phe Tyr Leu Ala Leu Pro Pro Thr Val	
145 150 155	160
Glu Ala Val Thr Lys Asn Ile His Glu Ser Cys Met Ser Gln Ile	Glv
165 170 175	4

PCT/US00/05881

455

WO 00/55173

тгр	ASN	Arg	180	11e	Val	GIu	Lys	185	Phe	Gly	Arg	Asp	190	GIN	ser
Ser	Asp	Arg 195	Leu	Ser	Asn	His	11e 200	Ser	Ser	Leu	Phe	Arg 205	Glu	Asp	Gln
Ile	Туг 210	Arg	Ile	Asp	His	Туг 215	Leu	Gly	Lys	Glu	Met 220	Val	Gln	Asn	Leu
Met 225	Val	Leu	Arg	Phe	Ala 230	Asn	Arg	Ile	Phe	Gly 235	Pro	Ile	Trp	Asn	Arg 240
Asp	Asn	Ile	Ala	Cys 245	Val	Ile	Leu	Thr	Phe 250	Lys	Glu	Pro	Phe	Gly 255	Thr
Glu	Gly	Arg	Gly 260	Gly	Tyr	Phe	Asp	Glu 265	Phe	Gly	Ile	Ile	Arg 270	Asp	Val
Met	Gln	Asn 275	His	Leu	Leu	Gln	Met 280	Leu	Cys	Leu	Val	Ala 285	Met	Glu	Lys
Pro	Ala 290	Ser	Thr	Asn	Ser	Asp 295	Asp	Val	Arg	Asp	Glu 300	Lys	Val	Lys	Val
Leu 305	Lys	Суѕ	Ile	Ser	Glu 310	Val	Gln	Ala	Asn	Asn 315	Val	Val	Leu	Gly	Gln 320
Tyr	Val	Gly	Asn	Pro 325	Asp	Gly	Glu	Gly	Glu 330	Ala	Thr	Lys	Gly	Tyr 335	Leu
Asp	Asp	Pro	Thr 340	Val	Pro	Arg	Gly	Ser 345	Thr	Thr	Ala	Thr	Phe 350	Ala	Ala
Val	Val	Leu 355	Tyr	Val	Glu	Asn	Glu 360	Xaa	Trp	Asp	Gly	Val 365	Pro	Phe	Ile
	370	Cys		-		375				-	380				
Gln 385	Phe	His	Asp	Val	Ala 390	Gly	Asp	Ile	Phe	His 395	Gln	Gln	Cys	Lys	Arg 400
		Leu		405					410					415	
		Thr	420					425					430		
Leu	Asp	Leu 435	Thr	Tyr	Gly	Asn	Arg 440	Tyr	Lys	Asn	Val	Lys 445	Leu	Pro	Asp

PCT/US00/05881

Ala Tyr Glu Arg Leu Ile Leu Asp Val Phe Cys Gly Xaa Gln Met His 450 455 460

Phe Val Arg Arg Thr Ser Ser Val Arg Pro Gly Val Phe Ser Pro His 465 470 475 480

Cys Cys Thr Arg Leu Ser Trp Arg Ser Pro Ser Pro Ser Pro Ile Phe 485 490 495

Met Ala Ala Glu Ala Pro Arg Arg Gln Thr Ser 500 505

<210> 503

WO 00/55173

<211> 260

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (69)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 503

Gly Pro Glu Val Leu Pro Glu Pro Arg Val Pro Arg Glu Ala Leu Ala 1 5 10 15

Phe Ile Ile Arg Ser Phe Gly Gly Glu Val Ser Trp Asp Lys Ser Leu 20 25 30

Cys Ile Gly Ala Thr Tyr Asp Val Thr Asp Ser Arg Ile Thr His Gln 35 40 45

Ile Val Asp Arg Pro Gly Gln Gln Thr Ser Val Ile Gly Arg Cys Tyr 50 55 60

Val Gln Pro Gln Xaa Val Phe Asp Ser Val Asn Ala Arg Leu Leu 65 70 75 80

Pro Val Ala Glu Tyr Phe Ser Gly Val Gln Leu Pro Pro His Leu Ser 90 95

Pro Phe Val Thr Glu Lys Glu Gly Asp Tyr Val Pro Pro Glu Lys Leu 100 105 110

Lys Leu Leu Ala Leu Gln Arg Gly Glu Asp Pro Gly Asn Leu Asn Glu 115 120 125

Ser Glu Glu Glu Glu Glu Asp Asp Asn Asn Glu Gly Asp Gly Asp

457

130 135 140 Glu Glu Gly Glu Asn Glu Glu Glu Glu Asp Ala Glu Ala Gly Ser 150 155 Glu Lys Glu Glu Glu Ala Arg Leu Ala Ala Leu Glu Glu Gln Arg Met 170 Glu Gly Lys Lys Pro Arg Val Met Ala Gly Thr Leu Lys Leu Glu Asp 185 Lys Gln Arg Leu Ala Gln Glu Glu Glu Ser Glu Ala Lys Arg Leu Ala 200 Ile Met Met Met Lys Lys Arg Glu Lys Tyr Leu Tyr Gln Lys Ile Met 215 Phe Gly Lys Arg Arg Lys Ile Arg Glu Ala Asn Lys Leu Ala Glu Lys 230 235 Arg Lys Ala His Asp Glu Ala Val Arg Ser Glu Lys Lys Ala Lys Lys 250 Ala Arg Pro Glu 260 <210> 504 <211> 424 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (292) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (342) <223> Xaa equals any of the naturally occurring L-amino acids <400> 504 Leu Leu Gln Arg Cys Tyr Ala Phe Pro Gly His Arg Leu Ala His Ser 5 Gly Ser Asp Leu Ser Leu Leu Val Pro Glu Ile Glu Asp Met Tyr Ser 20 25 Ser Pro Tyr Leu Arg Pro Ser Glu Ser Pro Ile Thr Val Glu Val Asn WO 00/55173

		35					40					45			
Cys	Thr 50	Asn	Pro	Gly	Thr	Arg 55	туг	Cys	Trp	Met	ser 60	Thr	Gly	Leu	Tyr
Ile 65	Pro	Gly	Arg	Gln	Ile 70	Ile	Glu	Val	Ser	Leu 75	Pro	Glu	Ala	Ala	Ala 80
Ser	Ala	Asp	Leu	Lys 85	Ile	Gln	Ile	Gly	Cys 90	His	Thr	Asp	Asp	Leu 95	Thr
Arg	Ala	Ser	100	Leu	Phe	Arg	Gly	Pro 105	Leu	Val	Ile	Asn	Arg 110	Cys	Суз
Leu	Asp	Lys 115	Pro	Thr	Lys	Ser	Ile 120	Thr	Cys	Leu	Trp	Gly 125	Gly	Leu	Leu
Tyr	Ile 130	Ile	Val	Pro	Gln	Asn 135	Ser	Lys	Leu	Gly	Ser 140	Val	Pro	Val	Thr
Val 145	Lys	Gly	Ala	Val	His 150	Ala	Pro	Tyr	Tyr	Lys 155	Leu	Gly	Glu	Thr	Thr 160
Leu	Glu	Glu	Trp	Lys 165	Arg	Arg	Ile	Gln	Glu 170	Asn	Pro	Gly	Pro	Trp 175	Gly
Glu	Leu	Ala	Thr 180	Asp	Asn	Ile	Ile	Leu 185	Thr	Val	Pro	Thr	Ala 190	Asn	Leu
Arg	Thr	Leu 195	Glu	Asn	Pro	Glu	Pro 200	Leu	Leu	Arg	Leu	Trp 205	Asp	Glu	Val
Met	Gln 210	Ala	Val	Ala	Arg	Leu 215	Gly	Ala	Glu	Pro	Phe 220	Pro	Leu	Arg	Leu
Pro 225	Gln	Arg	Ile	Val	Ala 230	Asp	Val	Gln	Ile	Ser 235	Val	Gly	Trp	Met	His 240
Ala	Gly	Tyr	Pro	Ile 245	Met	Суз	His	Leu	Glu 250	Ser	Val	Gln	Glu	Leu 255	Ile
Asn	Glu	Lys	Leu 260	Ile	Arg	Thr	Lys	Gly 265	Leu	Trp	Gly	Pro	Val 270	His	Glu
Leu	Gly	Arg 275	Asn	Gln	Gln	Arg	Gln 280	Glu	Trp	Glu	Phe	Pro 285	Pro	His	Thr
Thr	Glu 290	Ala	Xaa	Cys	Asn	Leu 295	Trp	Cys	Val	Tyr	Val 300	His	Glu	Thr	Val
Leu	Gly	Ile	Pro	Arq	Ser	Arq	Ala	Asn	Ile	Ala	Leu	Trp	Pro	Pro	Val

459

310 305 315 320 Arg Glu Lys Arg Val Arg Ile Tyr Leu Ser Lys Gly Pro Asn Val Lys 330 Asn Trp Asn Ala Trp Xaa Ala Leu Glu Thr Tyr Leu Gln Leu Gln Glu 340 345 350 Ala Phe Gly Trp Glu Pro Phe Ile Arg Leu Phe Thr Glu Tyr Arg Asn 360 Gln Thr Asn Leu Pro Thr Glu Asn Val Asp Lys Met Asn Leu Trp Val 375 380 Lys Met Phe Ser His Gln Val Gln Lys Asn Leu Ala Pro Phe Glu 385 390 Ala Trp Ala Gly Pro Ser Arg Arg Lys Trp Leu Pro Ala Trp Pro Ile 410 Cys Leu Asn Gly Arg Lys Ile Leu 420 <210> 505 <211> 70 <212> PRT <213> Homo sapiens <220> <221> SITE ' <222> (49) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (54) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (66) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (70) <223> Xaa equals any of the naturally occurring L-amino acids <400> 505

PCT/US00/05881

Leu His Gln Ser Leu Leu His Leu Glu Lys Thr Asn Glu Arg Lys Ser
1 5 10 15

Ile Phe Leu Ile His Tyr Pro Asn Asn Asn Arg Thr Pro Tyr Arg Asn 20 25 30

Tyr Tyr His Tyr Val Ser Lys His Tyr Ile Pro Ile Thr Tyr Pro Thr 35 40 45

Xaa Ser Ile Ile Asp Xaa Ile Ser Ile Pro Thr Met Ile Ser Ala Leu 50 55 60

Asn Xaa Gln Asn Lys Xaa 65 70

<210> 506

WO 00/55173

<211> 434

<212> PRT

<213> Homo sapiens

<220>

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<222> (69)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (135)

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<220>

<221> SITE

<222> (363)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 506

Ser Thr His Ala Ser Ala His Ala Ser Val Ser Thr Ala Ala Ala Ala 1 5 10 15

Ala Leu Ala Ala Ala Val Lys Ala Lys His Leu Ala Ala Val Glu 20 25 30

Glu Arg Lys Ile Lys Ser Leu Val Ala Leu Leu Val Glu Thr Gln Met 35 40 45

Lys Lys Leu Glu Ile Lys Leu Arg His Phe Glu Glu Leu Glu Thr Ile 50 60

Met Asp Arg Glu Xaa Glu Ala Leu Glu Tyr Gln Arg Gln Gln Leu Leu

65					70					75					80
Ala	Asp	Arg	Gln	Ala 85	Phe	His	Met	Glu	Gln 90	Leu	Lys	туr	Ala	Glu 95	Met
Arg	Ala	Arg	Gln 100	Gln	His	Phe	Gln	Gln 105	Met	His	Gln	Gln	Gln 110	Gln	Gln
Pro	Pro	Pro 115	Ala	Leu	Pro	Pro	Gly 120	Ser	Gln	Pro	Ile	Pro 125	Pro	Thr	Gly
Ala	Ala 130	Gly	Pro	Pro	Ala	Xaa 135	His	Gly	Leu	Ala	Val 140	Ala	Pro	Ala	Ser
Val 145	Val	Pro	Ala	Pro	Ala 150	Gly	Ser	Gly	Ala	Pro 155	Pro	Gly	Ser	Leu	Gly 160
Pro	Ser	Glu	Gln	11e 165	Gly	Gln	Ala	Gly	Ser 170	Thr	Ala	Gly	Pro	Gln 175	Gln
Gln	Gln	Pro	Ala 180	Gly	Ala	Pro	Gln	Pro 185	Gly	Ala	Val	Pro	Pro 190	Gly	Val
Pro	Pro	Pro 195	Gly	Pro	His	Gly	Pro 200	Ser	Pro	Phe	Pro	Asn 205	Gln	Gln	Thr
Pro	Pro 210	Ser	Met	Met	Pro	Gly 215	Ala	Val	Pro	Gly	Ser 220	Gly	His	Pro	Gly
Val 225	Ala	Gly	Asn	Ala	Pro 230	Leu	Gly	Leu	Pro	Phe 235	Gly	Met	Pro	Pro	Pro 240
Pro	Pro	Pro	Pro	Ala 245	Pro	Ser	Ile	Ile	Pro 250	Phe	Gly	Ser	Leu	Ala 255	Asp
Ser	Ile	Ser	Ile 260	Asn	Leu	Pro	Ala	Pro 265	Pro	Asn	Leu	His	Gly 270	His	His
His	His	Leu 275	Pro	Phe			Gly 280		Leu	Pro	Pro	Pro 285	Asn	Leu	Pro
Val	Ser 290	Met	Ala	Asn	Pro	Leu 295	His	Pro	Asn	Leu	Pro 300	Ala	Thr	Thr	Thr
Met 305	Pro	Ser	Ser	Leu	Pro 310	Leu	Gly	Pro	Gly	Leu 315	Gly	Ser	Ala	Ala	Ala 320
Gln	Ser	Pro	Ala	11e 325	Val	Ala	Ala	Val	Gln 330	Gly	Asn	Leu	Leu	Pro 335	Ser
Ala	Ser	Pro	Leu	Pro	Asp	Pro	Gly	Thr	Pro	Leu	Pro	Pro	Asp	Pro	Thr

462

350 340 345 Ala Pro Ser Pro Arg His Gly His Pro Cys Xaa His Leu His Ser Glu 360 Glu Pro Ala Arg His Leu Ser Pro Ser Pro Pro Val Asp Ile Thr Val 375 Pro Gly Thr Ala Leu Pro Pro Pro Leu Gly Pro Ser Pro Ala Trp Arg 390 395 Val His His Tyr Val Arg Lys Ala Pro Ser Ala Pro Pro Lys Pro Ser 405 410 Pro Cys Leu Thr Glu Ala Cys Ile Phe Ile Ser Asp Tyr Ser Arg Thr 425 Ser Val <210> 507 <211> 303 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (165) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (280) <223> Xaa equals any of the naturally occurring L-amino acids <400> 507 Glu Tyr Val Phe Pro Ala Lys Lys Leu Gln Glu Tyr Arg Val Leu 10 Ile Thr Thr Leu Ile Thr Ala Gly Ser Trp Ser Arg Pro Ser Phe Pro Leu Ile Thr Ser His Thr Ser Ser Ser Met Arg Leu Ala Thr Ala Trp 40 45 Ser Leu Arg Ser Leu Val Ala Ile Ala Gly Leu Met Glu Val Lys Glu 50 55

Thr Gly Asp Pro Gly Gly Gln Leu Val Leu Ala Gly Asp Pro Arg Gln

65					70					75				•	80
Leu	Gly	Pro	Val	Leu 85	Arg	Ser	Pro	Leu	Thr 90	Gln	Lys	His	Gly	Leu 95	Gly
Tyr	Ser	Leu	Leu 100	Glu	Arg	Leu	Leu	Thr 105	Tyr	Asn	Ser	Leu	туг 110	Lys	Lys
Gly	Pro	Asp 115	Gly	Tyr	Asp	Pro	Gln 120	Phe	Ile	Thr	Lys	Leu 125	Leu	Arg	Asn
Tyr	Arg 130	Ser	His	Pro	Thr	Ile 135	Leu	Asp	Ile	Pro	Asn 140	Gln	Leu	Tyr	Tyr
Glu 145	Gly	Glu	Leu	Gln	Ala 150	Cys	Ala	Asp	Val	Val 155	Asp	Arg	Glu	Arg	Phe 160
Суз	Arg	Trp	Ala	Xaa 165	Leu	Pro	Arg	Gln	Gly 170	Phe	Pro	Ile	Ile	Phe 175	His
Gly	Val	Met	Gly 180	Lys	Asp	Glu	Arg	Glu 185	Gly	Asn	Ser	Pro	Ser 190	Phe	Phe
Asn	Pro	Glu 195	Glu	Ala	Ala	Thr	Val 200	Thr	Ser	Tyr	Leu	Lys 205	Leu	Leu	Leu
Ala	Pro 210	Ser	Ser	Lys	Lys	Gly 215	Lys	Ala	Arg	Leu	Ser 220	Pro	Arg	Ser	Val
Gly 225	Val	Ile	Ser	Pro	туг 230	Arg	Lys	Gln	Val	Glu 235	Lys	Ile	Arg	Tyr	Cys 240
Ile	Thr	Lys	Leu	Asp 245	Arg	Glu	Leu	Arg	Gly 250	Leu	Asp	Asp	Ile	Lys 255	Asp
Leu	Lys	Val	Gly 260	Ser	Val	Glu	Glu	Phe 265	Gln	Gly	Gln	Glu	Arg 270	Ser	Val
Ile	Leu	Ile 275	Ser	Thr	Val	Arg	Xaa 280	Ala	Arg	Ala	Leu	Cys 285	Ser	Trp	Ile
Trp	Thr 290	Leu	Ile	Trp	Val	Ser 295	Leu	Arg	Thr	Pro	Arg 300	Gly	Ser	Met	

<210> 508

<211> 250

<212> PRT

<213> Homo sapiens

	1> S														
	2> (. 3> Xa		qual	s an	y of	the	nati	ıral	ly o	ccur	ring	L-a	nino	acio	is
<400	0> 50	80													
Glu 1	Gln	Tyr	Leu	Pro 5	Leu	Thr	Glu	Glu	Glu 10	Leu	Glu	Lys	Glu	Ala 15	Xaa
Lys	Val	Glu	Gly 20	Phe	Asp	Leu	Val	Gln 25	Lys	Pro	Ser	Tyr	Tyr 30	Val	Arg
Leu	Gly	Ser 35	Leu	Ser	Thr	Lys	Leu 40	His	Ser	Arg	Ala	Tyr 45	Gln	Gln	Ala
Leu	Ser 50	Arg	Val	Lys	Glu	Ala 55	Lys	Gln	Lys	Ser	Gln 60	Gln	Thr	Ile	Ser
Gln 65	Leu	His	Ser	Thr	Val 70	His	Leu	Ile	Glu	Phe 75	Ala	Arg	Lys	Asn	Val 80
Туг	Ser	Ala	Asn	Gln 85	Lys	Ile	Gln	Asp	Ala 90	Gln	Asp	Lys	Leu	Tyr 95	Leu
Ser	Trp	Val	Glu 100	Trp	Lys	Arg	Ser	Ile 105	Gly	Tyr	Asp	Asp	Thr 110	Asp	Glu
Ser	His	Cys 115	Ala	Glu	His	Ile	Glu 120	Ser	Arg	Thr	Leu	Ala 125	Ile	Ala	Arg
Asn	Leu 130	Thr	Gln	Gln	Leu	Gln 135	Thr	Thr	Суѕ	His	Thr 140	Leu	Leu	Ser	Asn
11e 145	Gln	Gly	Val	Pro	Gln 150	Asn	Ile	Gln	Asp	Gln 155	Ala	Lys	His	Met	Gly 160
Val	Met	Ala	Gly	Asp 165	Ile	Tyr	Ser	Val	Phe 170	Arg	Asn	Ala	Ala	Ser 175	Phe
Lys	Glu	Val	Ser 180	Asp	Ser	Leu	Leu	Thr 185	Ser	Ser	Lys	Gly	Gln 190	Leu	Gln
Lys	Met	Lys 195	Glu	Ser	Leu	Asp	Asp 200	Val	Met	Asp	Tyr	Leu 205	Val	Asn	Asn
Thr	Pro 210	Leu	Asn	Trp	Leu	Val 215	Gly	Pro	Phe	туг	Pro 220	Gln	Leu	Thr	Glu
Ser 225	Gln	Asn	Ala	Gln	Asp 230	Gln	Gly	Ala	Glu	Met 235	Asp	Lys	Ser	Ser	Gln 240

465

Glu Thr Gln Arg Ser Glu His Lys Thr His 245 250

<210> 509

<211> 98

<212> PRT

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<222> (97)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 509

His Glu Leu Trp Gly Cys Gly Pro Val Thr Pro Arg Arg Thr Ala Pro 1 5 10 15

Ser Gly Trp Ala Gln Ala Pro Leu Ser Asp Thr Ala Gln Val Tyr Met 20 25 30

Glu Leu Gln Gly Leu Val Asp Pro Gln Ile Gln Leu Pro Leu Leu Ala 35 40 45

Ala Arg Ser Thr Ser Cys Arg Ser Ser Leu Ile Ala Ser Gln Pro Gly
50 55 60

Pro His Gln Lys Gly Arg Gln Gly Leu Arg Gly Asn Lys Ser Phe Leu 65 70 75 80

Pro Ser Ser Trp Asn Cys Gln Asn Trp Thr Arg Gln Pro Leu Thr Ser 85 90 95

Xaa Ser

<210> 510

<211> 392

<212> PRT

<213> Homo sapiens

<400> 510

Gly Ala Met Arg Gly Asp Arg Gly Arg Gly Arg Gly Arg Phe Gly
1 5 10 15

Ser Arg Gly Gly Pro Gly Gly Gly Phe Arg Pro Phe Val Pro His Ile 20 25 30

Pro	Phe	Asp 35	Phe	Tyr	Leu	Cys	Glu 40	Met	Ala	Phe	Pro	Arg 45	Val	Lys	Pro
Ala	Pro 50	Asp	Glu	Thr	Ser	Phe 55	Ser	Glu	Ala	Leu	Leu 60	Lys	Arg	Asn	Gln
Asp 65	Leu	Ala	Pro	Asn	Ser 70	Ala	Glu	Gln	Ala	Ser 75	Ile	Leu	Ser	Leu	Val 80
Thr	Lys	Ile	Asn	Asn 85	Val	Ile	Asp	Asn	Leu 90	Ile	Val	Ala	Pro	Gly 95	Thr
Phe	Glu	Val	Gln 100	Ile	Glu	Glu	Val	Arg 105	Gln	Val	Gly	Ser	туr 110	Lys	Lys
Gly	Thr	Met 115	Thr	Thr	Gly	His	Asn 120	Val	Ala	Asp	Leu	Val 125	Val	Ile	Leu
Lys	11e 130	Leu	Pro	Thr	Leu	Glu 135	Ala	Val	Ala	Ala	Leu 140	Gly	Asn	Lys	Val
Val 145	Glu	Ser	Leu	Arg	Ala 150	Gln	Asp	Pro	Ser	Glu 155	Val	Leu	Thr	Met	Leu 160
				165					170				Thr	175	
			180					185					Asp 190		
		195					200					205	Ala		
	210					215					220		Val		
225					230	_				235			Gly		240
				245					250				Ala	255	
			260					265					Tyr 270		
-		275					280					285	Ser		
Ile	Thr 290	Asp	Pro	Cys	Glu	Ser 295	Gly	Asn	Phe	Arg	Val 300	His	Thr	Val	Met

Thr Leu Glu Gln Gln Asp Met Val Cys Tyr Thr Ala Gln Thr Leu Val 305 310 315 320

Arg Ile Leu Ser His Gly Gly Phe Arg Lys Ile Leu Gly Gln Glu Gly 325 330 335

Asp Ala Ser Tyr Leu Ala Ser Glu Ile Ser Thr Trp Asp Gly Val Ile 340 345 350

Val Thr Pro Ser Glu Lys Ala Tyr Glu Lys Pro Pro Glu Lys Lys Glu 355 360 365

Gly Glu Glu Glu Glu Glu Asn Thr Glu Glu Pro Pro Gln Gly Glu Glu 370 380

Glu Glu Ser Met Glu Thr Gln Glu 385 390

<210> 511

<211> 72

<212> PRT

<213> Homo sapiens

<400> 511

His Gly Gly Gly Lys Gly Arg Gln Val Gly Leu His Ser Val Gln Arg 1 5 10 15

Pro Ala Arg Arg Glu Thr Ala Ala Ser Trp Gly Leu Cys Val Lys Ile $20 \hspace{1cm} 25 \hspace{1cm} 30$

Pro Asp Leu Gly Val Ala Phe Val Tyr Lys Met Gln Glu Gly Lys Pro $35 \hspace{1cm} 40 \hspace{1cm} 45 \hspace{1cm}$

Val Pro Asp Ser Ser Arg Gln His Ala Gln Leu Ser Gly Ser Pro Val 50 60

Ser Gln Gly Leu Ser Leu Pro Leu 65 70

<210> 512

<211> 181

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (14)

468

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Asp Ser Ile Phe Phe

<21	0> 5	13													
<21	1> 2	02													
<21	2> P	RT													
<21	3> н	omo :	sapi	ens											
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<22	1> S	ITE													
<22	2> (15)													
		-	quals	s an	y of	the	nati	ural:	ly o	ccur	ring	L-ar	mino	acio	is
<40	0> 5	13													
Leu	Gly	Asp	Thr	Ile	Glu	Gly	Thr	Pro	Ala	Gly	Thr	Val	Pro	Xaa	Phe
1				5		_			10	_				15	
Pro	Gly	Arg		Thr	Arg	Ala	Ile		Ala	Gln	Asp	Gln		Glu	Lys
			20					25					30		
Glu	Asn	Pro 35	Met	Arg	Glu	Leu	Arg 40	Ile	Arg	Lys	Leu	Cys 45	Leu	Asn	Ile
Суѕ	Val 50	Gly	Glu	Ser	Gly	Asp 55	Arg	Leu	Thr	Arg	Ala 60	Ala	Lys	Val	Let
Glu 65	Gln	Leu	Thr	Gly	Gln 70	Thr	Pro	Val	Phe	Ser 75	Lys	Ala	Arg	туг	Thi
Val	Arg	Ser	Phe	Gly 85	Ile	Arg	Arg	Asn	Glu 90	Lys	Ile	Ala	Val	His 95	Суя
Thr	Val	Arg	Gly 100	Ala	Lys	Ala	Glu	Glu 105	Ile	Leu	Glu	Lys	Gly 110	Leu	Lys
Val	Arg	Glu 115	Tyr	Glu	Leu	Arg	Lys 120	Asn	Asn	Phe	Ser	Asp 125	Thr	Gly	Ası
Phe	Gly 130	Phe	Gly	Ile	Gln	Glu 135	His	Ile	Asp	Leu	Gly 140	Ile	Lys	Туr	Ası
Pro 145	Ser	Ile	Gly	Ile	Tyr 150	Gly	Leu	Asp	Phe	Туг 155	Val	Val	Leu	Gly	Arg 160
Pro	Gly	Phe	Ser	Ile 165	Ala	Asp	Lys	Lys	Arg 170	Arg	Thr	Gly	Cys	Ile 175	Gly
Ala	Lys	His	Arg 180	Ile	Ser	Lys	Glu	Glu 185	Ala	Met	Arg	Trp	Phe 190	Gln	Glr
Lys	Tyr	Asp 195	Gly	Ile	Ile	Leu	Pro 200	Gly	Lys						

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Xaa Xaa Lys Asn Xaa Ile Thr Pro Lys Glu Glu Ser Pro Pro His Xaa
                                     10
Ala Leu Leu Ser Lys Cys Leu Leu Thr Pro Ser Pro Lys Met Pro Pro
Ile Leu Xaa Val Met Ala Ala Leu Gly Phe Glu Arg Arg Glu Phe Gly
                             40
Ser Thr Ser Val Glu Arg Val Gln Ser Arg Gln Leu Asp Cys Phe
<210> 515
<211> 218
<212> PRT
<213> Homo sapiens
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		151)													
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	J- N	uu c	daar	3 an	y OI	Cile	mac	urar.	ry C	ccur	Ling	D-01		acr	45
<22(15														
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	2> ()														
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-22															
<220															
	1> S														
	2> (:		_		_				_						_
<22:	3> X	aa e	qual	s an	y of	the	nati	ural.	ly o	ccur	ring	L-aı	nino	acio	is
				•											
)> 5. -										_		_		
	Leu	Ala	Arg	Gly	Cys	Gln	Arg	Pro	_	Ala	Val	Leu	Tyr		Arg
1				5					10					15	
His	Tyr	Asn	Ile	Pro	Val	Ile	His	Ala	Phe	Arg	Arg	Ala	Val	Asp	Asp
			20					25					30		
Pro	Gly	Leu	Val	Phe	Asn	Gln	Leu	Pro	Lys	Met	Leu	Tyr	Pro	Glu	Tyr
		35					40					45			
His	Lys	Val	His	Gln	Met	Met	Arg	Glu	Gln	Ser	Ile	Leu	Ser	Pro	Ser
	50					55					60				
Pro	Tyr	Glu	Gly	Tyr	Arg	Ser	Leu	Pro	Arg	His	Gln	Leu	Leu	Cys	Phe
65					70				_	75				_	80
Lvs	Glu	Asp	Cvs	Gln	Ala	Val	Phe	Gln	Asp	Leu	Glu	Glv	Val	Glu	Lvs
•		•	•	85					90			•		95	
Val	Phe	Glv	Val	Ser	Leu	Val	Len	Val	Leu	Tle	Glv	Ser	His	Pro	Asp
		0-1	100		200			105	200		,		110		
			100					103					110		
T.a.ı	Ser	Dhe	T.Ou	Pro	Glu	Δla	Gly	λla	Aco	Dha	Δla	Va 1	Aen	Pro	Aen
Deu	561	115	Deu	110	Gry	ALU	120	AIG	тэр	FIIC	ALG	125	Yaħ	FIU	изр
		113					120					123			
C1 n	Dro	T 011	802	A1-	T	N ===	200	D=-	710	***	1707	7.00	Dro	Bho	mb~
GIII		Leu	Ser	Ala	Lys		ASII	PIO	116	Азр		ASP	PIO	Pne	THE
	130					135					140				
m	~ 1		m)					_	_				_		
	GIN	ser	Thr	Arg		xaa	GIA	Leu	Tyr		Met	GTÀ	Pro	Leu	
145					150					155					160
Gly	Asp	Asn	Phe	Val	Arg	Phe	Val	Gln	_	Gly	Ala	Leu	Ala		Ala
				165					170					175	
Ser	Ser	Leu	Leu	Ara	Lvs	Glu	Gln	Asn	His	Leu	His	Ara	Gln	Pro	Trp

185

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Ser Ser Leu Arg Gly Ile His Pro Leu Ile Asp Leu Lys Ser Gly Val
        195
                             200
                                                 205
Xaa Pro Xaa Leu Val Lys Leu Thr Ala Gln
    210
                        215
<210> 516
<211> 41
<212> PRT
<213> Homo sapiens
<220>
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<222> (22)
<223> Xaa equals any of the naturally occurring L-amino acids
<400> 516
Asn Gly Arg Pro Asp Ser Thr Gly Pro Ala Ile Pro Gly Ile Leu Ser
Trp Gly Phe Glu Thr Xaa Leu Arg Asp Arg Glu Thr Asp Pro Arg Asn
             20
                                 25
Val Leu Asn Cys Asn Gly Pro His Thr
         35
<210> 517
<211> 250
<212> PRT
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<220>
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<222> (118)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (161)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (204)
<223> Xaa equals any of the naturally occurring L-amino acids
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PCT/US00/05881

473

WO 00/55173

)> 5														
Gly 1	Phe	Asn	Arg	Ser 5	Phe	Cys	Gly	Arg	Asn 10	Ala	Thr	Val	Tyr	Gly 15	Lys
Gly	Val	Tyr	Phe 20	Ala	Arg	Arg	Ala	Ser 25	Leu	Ser	Val	Gln	Asp 30	Arg	Туr
Ser	Pro	Pro 35	Asn	Ala	Asp	Gly	His 40	Lys	Ala	Val	Phe	Val 45	Ala	Arg	Val
Leu	Thr 50	Gly	Asp	туг	Gly	Gln 55	Gly	Arg	Arg	Gly	Leu 60	Arg	Ala	Pro	Pro
Leu 65	Arg	Gly	Pro	Gly	His 70	Val	Leu	Leu	Arg	Tyr 75	Asp	Ser	Ala	Val	Asp 80
Cys	Ile	Cys	Gln	Pro 85	Ser	Ile	Phe	Val	Ile 90	Phe	His	Asp	Thr	Gln 95	Ala
Leu	Pro	Thr	His 100	Leu	Ile	Thr	Cys	Glu 105	Ala	Arg	Ala	Pro	Arg 110	Phe	Pro
Arg	Arg	Pro 115	Leu	Trp	Xaa	Pro	Gly 120	Pro	Leu	Pro	Arg	His 125	Leu	Thr	Glu
Gly	Ala 130	Thr	Leu	Trp	Pro	Pro 135	Ala	Ser	Gln	Ala	Pro 140	Ser	Ser	Ala	Gln
Ala 145	Asp	Ala	Pro	Arg	Pro 150	Gln	Leu	Trp	Pro	Pro 155	Glu	Leu	Ser	Pro	Gly 160
Xaa	Pro	Cys	Leu	Pro 165	Leu	Arg	Ala	Pro	Glu 170	Gly	Gly	Val	Gly	Asp 175	Gly
Gly	Gln	Gln	Arg 180	Pro	Arg	Gly	Ala	Gly 185	Leu	Gly	Pro	Ser	Leu 190	Gly	Arg
Pro	His	His 195	Gln	Gly	Ser	Ala	Glu 200	Pro	Arg	Arg	Xaa	His 205	Arg	Pro	Pro
Ala	Ala 210	Pro	Arg	Pro	Arg	Pro 215	Ser	Arg	Leu	Cys	Cys 220	Leu	Asn	Lys	Arg
Glu 225	Arg	Glu	Pro	Arg	Arg 230	Lys	Gly	Pro	Gly	Lys 235	Lys	Lys	Lys	Lys	Lys 240
Lys	Lys	Lys	Lys	Lys 245	Lys	Lys	Lys	Lys	Lys 250						

474

<210> 518 <211> 100

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<212> PRT
<213> Homo sapiens
<220>
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<222> (3)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (7)
<223> Xaa equals any of the naturally occurring L-amino acids
<400> 518
Asn Pro Xaa Lys Lys Leu Xaa Ile Leu Ile Lys Trp Pro Pro Pro Phe
                                     10
Pro Pro Ser Phe Pro Pro Ser Pro Asn Ser Leu Ser Ser Ser Phe
Pro Pro Pro Leu Ser Leu Phe Ser Pro Ser Phe Thr Phe Leu Ile Ser
                             40
Val Lys Leu Glu Arg Phe Glu Ile Pro Ile Lys Val Arg Leu Ser Pro
     50
                         55
Glu Pro Trp Thr Pro Glu Thr Gly Leu Val Thr Asp Ala Phe Lys Leu
Lys Arg Lys Glu Leu Arg Asn His Tyr Leu Lys Asp Ile Glu Arg Met
                                     90
Tyr Gly Gly Lys
            100
<210> 519
<211> 60
<212> PRT
<213> Homo sapiens
<220>
<221> SITE
<222> (5)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
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475

<222> (17)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 519

His Glu Asp Gly Xaa Leu Met Gly Cys Arg His Arg Trp His Pro Arg 1 5 10 15

Xaa Val Pro Phe His Gln Thr Ser Pro Lys Thr Glu Leu Glu Ser Thr 20 25 30

Ile Phe Gly Ser Pro Arg Leu Ala Ser Gly Leu Phe Pro Glu Trp Gln 35 40 45

Ser Trp Gly Arg Met Glu Asn Leu Ala Ser Tyr Arg 50 55 60

<210> 520

<211> 120

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (25)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 520

Ser His Pro Tyr Ala Pro Ser Cys Gly Leu Arg Gly Pro Gly Ala Ala 1 5 10 15

Ser Arg Ala Arg Thr Arg Glu Arg Xaa Pro Gln Ala Glu Ala Glu Ala 20 25 30

Arg Ser Thr Pro Gly Pro Ala Gly Ser Arg Leu Gly Pro Glu Thr Phe 35 40 45

Arg Gln Arg Phe Arg Gln Phe Arg Tyr Gln Asp Ala Ala Gly Pro Arg
50 60

Glu Ala Phe Arg Gln Leu Arg Glu Leu Ser Arg Gln Trp Leu Arg Pro 65 70 75 80

Asp Ile Arg Thr Lys Glu Gln Ile Val Glu Met Leu Val Gln Glu Gln 85 90 95

Leu Leu Ala Ile Leu Pro Glu Ala Ala Arg Ala Arg Arg Ile Arg Arg 100 105 110

Arg Thr Asp Val Arg Ile Thr Gly

476

115 120

<210> 521

<211> 96

<212> PRT

<213> Homo sapiens

<400> 521

Gly His Gln Thr Val Ser Pro Ser Thr Gly Ser Arg Val Thr Arg Met

1 5 10 15

Phe Ser Leu Ile Ser Phe Ser His Val Phe Ile Lys Asp Ile Cys Lys 20 25 30

Leu Pro Lys Asp Glu Gly Thr Cys Arg Asp Phe Ile Leu Lys Trp Tyr 35 40 45

Tyr Asp Pro Asn Thr Lys Ser Cys Ala Arg Phe Trp Tyr Gly Gly Cys
50 60

Gly Gly Asn Glu Asn Lys Phe Gly Ser Gln Lys Glu Cys Glu Lys Val 65 70 75 80

Cys Ala Pro Val Leu Ala Lys Pro Gly Val Ile Ser Val Met Gly Thr 85 90 95

<210> 522

<211> 122

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (18)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 522

Asn Ser Gly Phe Arg Pro Lys Asn Pro Val Gly Arg Gly Glu Pro 1 5 10 15

Glu Xaa Cys Gly Gly Ala Gly Gly Leu Gly Cys Thr Leu Val Trp Gly
20 25 30

Gly Thr Gly Ala Ala Val Val Thr Gly Val Val Trp Leu Leu Pro

477

35 40 45

Asn Gly Gly Val Gly Val Gly Leu Leu Gly Pro Gln Ser Pro Val Gly 50 55 60

Gly Ser Asp Ser Ala Pro Tyr Ser Leu His Pro Ala Gly Arg Thr Trp
65 70 75 80

Gly Leu Arg Ser Glu Cys Ile Pro Pro Leu Ser Phe Asn Leu Ser Cys 85 90 95

Arg Thr His Ser Gly Pro Gly Ala Arg Leu Gly Glu Ala Gly Pro Asn 100 105 110

Tyr Gly Ser Arg Glu Leu Gln Val Pro Thr 115 120

<210> 523

<211> 94

<212> PRT

<213> Homo sapiens

<400> 523

Leu Ile Pro Gln Val Cys Cys Lys His Ser Met Glu Asp Thr Asp Asp

1 5 10 15

Ser Leu Val Leu Val Phe Leu Ser Ala Val Asn Val Gln Gln Phe Ala 20 25 30

Gln Glu Leu Gly Asp His Ile Cys Leu Ser Gly Gln Gly Ser Glu Val
35 40 45

His Trp Asn Leu Leu Arg Asn Leu Phe Val Lys Thr Ile Val Asn Asn 50 55 60

Tyr Cys Ile Phe Leu Gln Lys Tyr Ile Leu Glu Asn Cys Ile Leu Ser 65 70 75 80

Ile Lys Val Phe Leu Cys Lys Lys Lys Lys Lys Leu Val 85 90

<210> 524

<211> 93

<212> PRT

<213> Homo sapiens

<220>

478

<221> SITE <222> (78) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (86) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (93) <223> Xaa equals any of the naturally occurring L-amino acids <400> 524 Ser Ala Val Met Gly Arg Lys Lys Lys Gln Leu Lys Pro Trp Cys Trp Tyr Cys Asn Arg Asp Phe Asp Asp Glu Lys Ile Leu Ile Gln His 25 20 Gln Lys Ala Lys His Phe Lys Cys His Ile Cys His Lys Lys Leu Tyr Thr Gly Pro Gly Leu Ala Ile His Cys Met Gln Val His Lys Glu Thr Ile Asp Ala Val Pro Asn Ala Tyr Leu Gly Glu Gln Thr Xaa Ile Gly 70 75 Asn Ile Trp Tyr Gly Xaa Tyr Ser Arg Lys Arg Tyr Xaa 85 90 <210> 525 <211> 324 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (323) <223> Xaa equals any of the naturally occurring L-amino acids <400> 525 Asp Leu Arg Leu Ser Arg Pro Glu Ala Val Glu Ala Glu Ala Met Met 1

Ala Ala Met Ala Thr Ala Arg Val Arg Met Gly Pro Arg Cys Ala Gln

25

30

nia	rea	35	ALG	mec	PIO	пр	40	PIO	val	rne	Leu	45	rea	Ala	MIC
Ala	Ala 50	Ala	Ala	Ala	Ala	Ala 55	Glu	Gln	Gln	Val	Pro 60	Leu	Val	Leu	Tr
Ser 65	Ser	Asp	Arg	Asp	Leu 70	Trp	Ala	Pro	Ala	Ala 75	Asp	Thr	His	Glu	Gl ₃
His	Ile	Thr	Ser	Asp 85	Leu	Gln	Leu	Ser	Thr 90	Туr	Leu	Asp	Pro	Ala 95	Leu
Glu	Leu	Gly	Pro 100	Arg	Asn	Val	Leu	Leu 105	Phe	Leu	Gln	Asp	Lys 110	Leu	Ser
Ile	Glu	Asp 115	Phe	Thr	Ala	Tyr	Gly 120	Gly	Val	Phe	Gly	Asn 125	Lys	Gln	Asp
Ser	Ala 130	Phe	Ser	Asn	Leu	Glu 135	Asn	Ala	Leu	Asp	Leu 140	Ala	Pro	Ser	Ser
Leu 145	Val	Leu	Pro	Ala	Val 150	Asp	Trp	Tyr	Ala	Val 155	Ser	Thr	Leu	Thr	Th:
Tyr	Leu	Gln	Glu	Lys 165	Leu	Gly	Ala	Ser	Pro 170	Leu	His	Val	Asp	Leu 175	Ala
Thr	Leu	Arg	Glu 180	Leu	Lys	Leu	Asn	Ala 185	Ser	Leu	Pro	Ala	Leu 190	Leu	Leu
Ile	Arg	Leu 195	Pro	Tyr	Thr	Ala	Ser 200	Ser	Gly	Leu	Met	Ala 205	Pro	Arg	Glu
Val	Leu 210	Thr	Gly	Asn	Asp	Glu 215	Val	Ile	Gly	Gln	Val 220	Leu	Ser	Thr	Leu
Lys 225	Ser	Glu	Asp	Val	Pro 230	Tyr	Thr	Ala	Ala	Leu 235	Thr	Ala	Val	Arg	Pro 240
Ser	Arg	Val	Ala	Arg 245	Asp	Val	Ala	Val	Val 250	Ala	Gly	Gly	Leu	Gly 255	Arg
Gln	Leu	Leu	Gln 260	Lys	Gln	Pro	Val	Ser 265	Pro	Val	Ile	His	Pro 270	Pro	Val
		275					280					285		Asn	
Ser	Val 290	Ala	Tyr	Lys	Asp	Gln 295	Trp	Glu	Asp	Leu	Thr 300	Pro	Leu	Thr	Phe

480

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Gly Val Gln Glu Leu Asn Leu Thr Gly Ser Phe Trp Asn Asp Ser Phe 305 310 310 315 315 320
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<210> 526
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<211> 66

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (2)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 526

Phe Xaa Val Ser Trp Thr Trp Lys Gln Val Ser Glu Phe Pro Gly Asp 1 5 10 15

Gln Arg Asp Glu Val Leu Gln Leu Pro Pro Ser Ser Cys Asn Leu Val 20 25 30

Ser Ser Gly Ala Gly Gly Glu Pro Glu Lys Leu Ala Ser Tyr Ile Thr 35 40 45

Ser Leu Trp Leu Phe Phe Ile Cys Lys Thr Arg Ile Ile Leu Asn Cys 50 60

Lys Gly 65

<210> 527

<211> 62

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (40)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 527

Asn Thr Gln Leu Trp Phe Leu Cys Phe Pro Asn Cys Lys Ala Ala Asp 1 5 10 15

Asn Lys Thr Pro Gly Phe His Val Ser Ser Ala Met Ser Thr Leu Thr 20 25 30

Gln Ile Leu Lys Gln Asn Ser Xaa Asn Ala Val Leu Arg Ile Gln Leu 35 40 45

Leu Leu Lys Pro Ile Ser Ile Cys Ile Ile Thr Thr Asn Ile 50 55 60

<210> 528

<211> 122

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (80)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (104)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (105)

<223> Xaa equals any of the naturally occurring L-amino acids

. <400> 528

Tyr Asn Lys Ile Glu Ile Met His Leu Val Met Trp Pro Thr Ser Leu 1 5 10 15

Leu Thr Thr Met Asp Cys Phe Gln Gln Gln Leu Ile Phe Trp Ser Val 20 25 30

Leu Arg Gly Ala Cys Met Ser Phe Val Thr Ser Gly Ser Thr Pro Ala 35 40 45

Val Lys Tyr Cys Phe His Leu Pro Leu Gln Lys Ala Ser Cys Leu Leu 50 55 60

Thr Ser Thr Ala Lys Ala Leu Phe Trp Thr Gly Tyr Leu Ile Lys Xaa 65 70 75 80

Ile Ser Val Arg Leu Cys Ser Val Ile Pro Ser Glu Pro Arg Phe Val 85 90 95

Ser Lys Ala Thr Val Leu Ser Xaa Xaa Pro Cys Val Trp Gly Gln Val

482

110

105

100

Ala Ile Pro Pro Met Ser Leu Val Ile Leu 115 120 <210> 529 <211> 182 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (25) <223> Xaa equals any of the naturally occurring L-amino acids Asp Arg Thr Arg Leu Ser Gln Ala Ser Thr Pro Thr Pro Val Cys Trp 1 5 10 15 Gly Leu Leu Gln Pro Pro Pro Trp Xaa Glu Ala Trp Tyr Arg Leu Thr His Arg Gly Leu Cys Gln Val Arg Phe Cys Arg Trp Ser Gln Ala Leu 40 Pro Glu Ala Arg Gly Gly Ala Trp Ala Gly Ser Pro Gly Glu Gly Gln Ala Gly Pro Arg Leu His Thr His Ile Gln Pro Ala Gly Leu Ser Ala 70 Val Leu Ser Pro Ser Leu Ser Ser Pro Ser Ser Ala Val Thr Leu Ser 85 90 Ser Pro Ser Leu Pro Ala Ser Pro Pro Ala Ala Pro Pro Val Lys Arg Met Thr Lys Asp Leu Ser Tyr Ala Gly Ser Lys Asn Gln Asn Phe Leu 120 Leu Ala Phe Ser Phe Val Ala Ser Pro Ala Pro Ala Leu Pro Val Ser 130 135 His Pro Gly Pro Arg Leu Glu Ala Ser Leu His Leu Ser Tyr Cys Phe Lys Pro Lys Phe Thr Val Ser Val Gly Gln Asp Leu Leu Ser Pro

170

PCT/US00/05881

Pro Leu Leu His Pro Pro 180

<210> 530

WO 00/55173

<211> 183

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (6)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (79)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (80)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (81) ---

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 530

Ala Leu Val Leu Gly Xaa Lys Ser Val Arg Met Ala Ser Ser Arg Met 5 10

Thr Arg Arg Asp Pro Leu Thr Asn Lys Val Ala Leu Val Thr Ala Ser 25

Thr Asp Gly Ile Gly Phe Ala Ser Pro Gly Val Trp Pro Arg Thr Gly 40

Pro Arg Gly Arg Gln Gln Pro Glu Ala Ala Glu Cys Gly Pro Gly Gly 50 55

Gly Thr Leu Gln Gly Glu Gly Leu Ser Val Thr Gly Thr Cys Xaa Xaa 70

Xaa Gly Lys Ala Glu Asp Arg Glu Arg Leu Val Ala Thr Ala Val Lys 85 90

Leu His Gly Gly Ile Asp Ile Leu Val Ser Asn Ala Ala Val Asn Pro 100 105 110

Phe Phe Gly Ser Ile Met Asp Val Thr Glu Glu Val Trp Asp Lys Leu 115 120 125 Trp Met Asp Lys Glu Lys Glu Glu Ser Met Lys Glu Thr Leu Arg Ile Arg Arg Leu Gly Glu Pro Glu Asp Cys Ala Gly Ile Val Ser Phe Leu Cys Ser Glu Asp Ala Ser Tyr Ile Thr Gly Glu Thr Val Val Val Gly 165 170 Gly Gly Thr Pro Ser Arg Leu 180 <210> 531 <211> 129 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (89) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (103) <223> Xaa equals any of the naturally occurring L-amino acids Asn Ser Ala Pro Leu Ser Pro Thr Gly Leu Gly Gln Gly His Thr Gly His Val Arg Phe Leu Ala Ala Val Gln Leu Pro Asp Gly Phe Asn Leu 25 Leu Cys Pro Thr Pro Pro Pro Pro Pro Asp Thr Gly Pro Glu Lys Leu 35 40 Pro Ser Leu Glu His Arg Asp Ser Pro Trp His Arg Gly Pro Ala Pro 55 Ala Arg Pro Lys Met Leu Val Ile Ser Gly Gly Asp Gly Tyr Glu Asp

70

Phe Arg Leu Ser Ser Gly Gly Kaa Ala Val Arg Leu Trp Val Glu

75

485

Thr Thr Ala Gln Thr Thr Xaa Ser Cys Gly Gly Cys Asp Pro Val Cys 100 105 110

Arg Gly Pro Gly Leu Ala Arg Pro Pro Ala Phe Ser Leu Leu Ala Ser 115 120 125

Pro

<210> 532

<211> 91

<212> PRT

<213> Homo sapiens

<400> 532

Gly Ala Ile Ala Ser Ser Gly Pro Thr Gly Gly Arg Val Arg Lys His
1 10 15

Gln Leu Leu Pro Gly Ala Val Arg Glu Trp Glu Gln Leu Trp Ala Pro 20 25 30

His Phe Arg Gln Val Leu Pro Lys Pro Ser Asp Ala Val Arg Pro Gly $35 \hspace{1cm} 40 \hspace{1cm} 45$

Leu Pro Val Val Leu Phe Arg Leu Cys Phe Gln Asn Ala Phe Ile Ser

Ser Val Pro Phe Gly Pro His Lys Ser Pro Trp Gly Val Gly Gly 65 70 75. 80

Leu Cys Arg His Pro His Phe Lys Ala Gly Ser 85 90

<210> 533

<211> 67

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (63)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 533

Asn Leu Cys Gln Val Gln Pro Thr Arg Leu Tyr Ser Ser Leu His Ser 1 5 10 15

Gly Leu His His Val Arg Gln Val Thr Gln Lys Ser Tyr Lys Val Ser 20 Thr Ser Gly Pro Arg Ala Phe Ser Ser Arg Ser Tyr Thr Ser Gly Pro 40 Gly Ser Arg Ile Ser Ser Ser Ala Phe Ser Arg Val Gly Gly Xaa Ser 55 Gly Gly Ala 65 <210> 534 <211> 144 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (140) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (141) <223> Xaa equals any of the naturally occurring L-amino acids <400> 534 Phe Asn Arg Arg Tyr Pro Lys Ile Gln Phe Ser Leu Ser Thr Gly Pro 5 Ser Gly Thr Met Leu Asp Gly Val Leu Glu Gly Lys Leu Asn Ala Ala Phe Ile Asp Gly Pro Ile Asn His Thr Ala Ile Asp Gly Ile Pro Val 40 Tyr Arg Glu Glu Leu Met Ile Val Thr Pro Gln Gly Tyr Ala Pro Val 50 55 Thr Arg Ala Ser Gln Val Asn Gly Ser Asn Ile Tyr Ala Phe Arg Ala Asn Cys Ser Tyr Arg Arg His Phe Glu Ser Trp Phe His Ala Asp Gly 90 Ala Ala Pro Gly Thr Ile His Glu Met Glu Ser Tyr His Gly Met Leu

105

PCT/US00/05881

Ala Cys Val Ile Ala Gly Ala Gly Ile Ala Leu Ile Pro Arg Ser Met

Leu Glu Ser Met Pro Gly His His Gln Val Glu Xaa Xaa Ala Val Ser 130 135 140

<210> 535

WO 00/55173

<211> 175

<212> PRT

<213> Homo sapiens

<400> 535

Arg Ala Pro Ala Arg Ile Ser Gly Gly Gly Ser Ala Met Val Gly 1 5 10 15

Gly Gly Val Gly Gly Leu Leu Glu Asn Ala Asn Pro Leu Ile Tyr
20 25 30

Gln Arg Ser Gly Glu Arg Pro Val Thr Ala Gly Glu Glu Asp Glu Gln 35 40 45

Val Pro Asp Ser Ile Asp Ala Arg Glu Ile Phe Asp Leu Ile Arg Ser 50 60

Ile Asn Asp Pro Glu His Pro Leu Thr Leu Glu Glu Leu Asn Val Val 65 70 75 80

Glu Gln Val Arg Val Gln Val Ser Asp Pro Glu Ser Thr Val Ala Val
85 90 95

Ala Phe Thr Pro Thr Ile Pro His Cys Ser Met Ala Thr Leu Ile Gly
100 105 110

Leu Ser Ile Lys Val Lys Leu Leu Arg Ser Leu Pro Gln Arg Phe Lys 115 120 125

Met Asp Val His Ile Thr Pro Gly Thr His Ala Ser Glu His Ala Val 130 135 140

Asn Lys Gln Leu Ala Asp Lys Glu Arg Val Ala Ala Ala Leu Glu Asn 145 150 155 160

Thr His Leu Leu Glu Val Val Asn Gln Cys Leu Ser Ala Arg Ser 165 170 175

488

<210> 536

<211> 148

<212> PRT

<213> Homo sapiens

<400> 536

Gly Trp His Arg Thr His His Arg Gly Arg His Gln Ala Arg Glu Ala 1 5 10 15

Glu Glu Glu Ala Trp Ala Ala Ala Glu Pro Ile Lys Lys Val Arg Lys
20 25 30

Ser Leu Ala Leu Asp Ile Val Asp Glu Asp Val Lys Leu Met Met Ser 35 40 45

Thr Leu Pro Lys Ser Leu Ser Leu Pro Thr Thr Ala Pro Ser Asn Ser 50 55 60

Ser Ser Leu Thr Leu Ser Gly Ile Lys Glu Asp Asn Ser Leu Leu Asn 65 70 75 80

Gln Gly Phe Leu Gln Ala Lys Pro Glu Lys Ala Ala Val Ala Gln Lys 85 90 95

Pro Arg Ser His Phe Thr Thr Pro Ala Pro Met Ser Ser Ala Trp Lys
100 105 110

Thr Val Ala Cys Gly Gly Thr Arg Asp Gln Leu Phe Met Gln Glu Lys 115 120 125

Ala Arg Gln Leu Leu Gly Arg Leu Lys Pro Ser His Thr Ser Arg Thr 130 135 140

Leu Ile Leu Ser 145

<210> 537

<211> 70

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (41)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

489

<221> SITE <222> (42) <223> Xaa equals any of the naturally occurring L-amino acids <400> 537 Arg Pro Thr Arg Ser Ala Trp Trp Gly Arg Leu Leu Ser Arg Val Ser 5 10 Pro Gln Pro Arg Pro Ala Ser Pro Ser Val Ser Thr Arg Asn Gln Leu Pro Glu Ala Arg Arg Gly Val Glu Xaa Xaa Glu Cys Glu Glu Thr Ala 40 Ala Ser Ala Glu Arg Ala Gly Pro Pro Arg Ala Leu Val Phe Gly Ala 55 Gln Ser Arg Ser Pro Gly 65 <210> 538 <211> 206 <212> PRT <213> Homo sapiens <400> 538 Gly Glu Val Ser Ala Ser Gly Ile Ala Arg Arg Gly Gly Pro Met Ala Pro Leu Gly Gly Ala Pro Arg Leu Val Leu Leu Phe Ser Gly Lys Arg Lys Ser Gly Lys Asp Phe Val Thr Glu Ala Leu Gln Ser Arg Leu Gly Ala Asp Val Cys Ala Val Leu Arg Leu Ser Gly Pro Leu Lys Glu Gln 55 Tyr Ala Gln Glu His Gly Leu Asn Phe Gln Arg Leu Leu Asp Thr Ser 65 70 75 Thr Tyr Lys Glu Ala Phe Arg Lys Asp Met Ile Arg Trp Gly Glu Glu 90 Lys Arg Gln Ala Asp Pro Gly Phe Phe Cys Arg Lys Ile Val Glu Gly 105

Ile Ser Gln Pro Ile Trp Leu Val Ser Asp Thr Arg Arg Val Ser Asp

Ile Gln Trp Phe Arg Glu Ala Tyr Gly Ala Val Thr Gln Thr Val Arg Val Val Ala Leu Glu Gln Ser Arg Gln Gln Arg Gly Trp Val Phe Thr 150 155 Pro Gly Val Asp Asp Ala Glu Ser Glu Cys Gly Leu Asp Asn Phe Gly 170 Asp Phe Asp Trp Val Ile Glu Asn His Gly Val Glu Gln Arg Leu Glu 180 185 Glu Gln Leu Glu Asn Leu Ile Glu Phe Ile Arg Ser Arg Leu 200 <210> 539 <211> 350 <212> PRT <213> Homo sapiens <400> 539 Ser Thr Leu Ile Ala Phe Ile Val Ile Ser Thr Leu Phe Pro Leu Leu Asp Met Thr Glu Ile Tyr Phe Ser Leu Leu Asp Glu Ile Val Asp Thr Leu Gly Glu Gly Ala Phe Gly Lys Val Val Glu Cys Ile Asp His Lys 40 Ala Gly Gly Arg His Val Ala Val Lys Ile Val Lys Asn Val Asp Arg 50 55 60 Tyr Cys Glu Ala Ala Arg Ser Glu Ile Gln Val Leu Glu His Leu Asn Thr Thr Asp Pro Asn Ser Thr Phe Arg Cys Val Gln Met Leu Glu Trp Phe Glu His His Gly His Ile Cys Ile Val Phe Glu Leu Leu Gly Leu 100 105 Ser Thr Tyr Asp Phe Ile Lys Glu Asn Gly Phe Leu Pro Phe Arg Leu 120

Asp His Ile Arg Lys Met Ala Tyr Gln Ile Cys Lys Ser Val Asn Phe

135

130

Leu 145	His	Ser	Asn	Lys	Leu 150	Thr	His	Thr	Asp	Leu 155	Lys	Pro	Glu	Asn	Ile 160
Leu	Phe	Val	Gln	Ser 165	Asp	туг	Thr	Glu	Ala 170	Tyr	Asn	Pro	Lys	Ile 175	Lys
Arg	Asp	Glu	Arg 180	Thr	Leu	Ile	Asn	Pro 185	Asp	Ile	Lys	Val	Val 190	Asp	Phe
Gly	Ser	Ala 195	Thr	Tyr	Asp	Asp	Glu 200	His	His	Ser	Thr	Leu 205	Val	Ser	Thr
Arg	His 210	Tyr	Arg	Ala	Pro	Glu 215	Val	Ile	Leu	Ala	Leu 220	Gly	Trp	Ser	Gln
Pro 225	Cys	Asp	Val	Trp	Ser 230	Ile	Gly	Cys	Ile	Leu 235	Ile	Glu	Tyr	Tyr	Leu 240
Gly	Phe	Thr	Val	Phe 245	Pro	Thr	His	Asp	Ser 250	Lys	Glu	His	Leu	Ala 255	Met
Met	Glu	Arg	Ile 260	Leu	Gly	Pro	Leu	Pro 265	Lys	His	Met	Ile	Gln 270	Lys	Thr
Arg	Lys	Arg 275	Lys	Tyr	Phe	His	His 280	Asp	Arg	Leu	Asp	Trp 285	Asp	Glu	His
Ser	Ser 290	Ala	Gly	Arg	Tyr	Val 295	Ser	Arg	Arg	Cys	Lys 300	Pro	Leu	Lys	Glu
Phe 305	Met	Leu	Ser	Gln	Asp 310	Val	Glu	His	Glu	Arg 315	Leu	Phe	Asp	Leu	11e 320
Gln	Lys	Met	Leu	Glu 325	Tyr	Asp	Pro	Ala	Lys 330	Arg	Ile	Thr	Leu	Arg 335	Glu
Ala	Leu	Lys	His 340	Pro	Phe	Phe	Asp	Leu 345	Leu	Lys	Lys	Ser	11e 350		

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<211> 324

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<213> Homo sapiens

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<222> (54)

<223> Xaa equals any of the naturally occurring L-amino acids

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Gln Ala Thr Met Gly Asn Val Leu Ala Ala Ser Ser Pro Pro Ala Gly
                                     10
Pro Pro Pro Pro Pro Ala Pro Ala Leu Val Gly Leu Pro Pro Pro
Pro Ser Pro Pro Gly Phe Thr Leu Pro Pro Leu Gly Gly Ser Leu Gly
                             40
Ala Gly Thr Ser Thr Xaa Arg Xaa Ser Glu Arg Thr Pro Gly Ala Ala
    50
                         55
Thr Ala Ser Ala Ser Gly Ala Ala Glu Asp Gly Ala Cys Gly Cys Leu
Pro Asn Pro Gly Thr Phe Glu Glu Cys His Arg Lys Cys Lys Glu Leu
                                     90
Phe Pro Ile Gln Met Glu Gly Val Lys Leu Thr Val Asn Lys Gly Leu
            100
                                105
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	Ser	Asn	His 115	Phe	Gln	Val	Asn	His 120	Thr	Val	Ala	Leu	Ser 125	Thr	Ile	Gly
	Glu	Ser 130	Asn	Tyr	His	Phe	Gly 135	Val	Thr	туг	Val	Gly 140	Thr	Lys	Gln	Leu
	Ser 145	Pro	Thr	Glu	Ala	Phe 150	Pro	Val	Leu	Val	Gly 155	Asp	Met	Asp	Asn	Ser 160
	Gly	Ser	Leu	Asn	Ala 165	Gln	Val	Ile	His	Gln 170	Leu	Gly	Pro	Gly	Leu 175	Arg
	Ser	Lys	Met	Ala 180	Ile	Gln	Thr	Gln	Gln 185	Ser	Lys	Phe	Val	Asn 190	Trp	Gln
	Val	Asp	Gly 195	Glu	Tyr	Arg	Gly	Ser 200	Asp	Phe	Thr	Ala	Ala 205	Val	Thr	Leu
	Gly	Asn 210	Pro	Asp	Val	Leu	Val 215	Gly	Ser	Gly	Ile	Leu 220	Val	Ala	His	Tyr
	Leu 225	Gln	Ser	Ile	Thr	Pro 230	Cys	Leu	Ala	Leu	Gly 235	Gly	Glu	Leu	Val	Туг 240
	His	Arg	Arg	Pro	Gly 245	Glu	Glu	Gly	Thr	Val 250	Met	Ser	Leu	Ala	Gly 255	Lys
•	Tyr	Thr	Leu	Asn 260	Asn	Trp	Leu	Ala	Thr 265	Val	Thr	Leu	Gly	Gln 270	Ala	Gly
1	Met	His	Ala 275	Thr	Tyr	Tyr	His	Lys 280	Ala	Ser	Asp	Gln	Leu 285	Gln	Val	Gly
•	Val	Glu 290	Phe	Glu	Ala	Ser	Thr 295	Arg	Xaa	Gln	Asp	Thr 300	Ser	Val	Ser	Xaa
	Xaa 305	Val	Pro	Ala	Trp	Asn 310	Leu	Pro	Lys	Gly	Gln 315	Pro	Xaa	Leu	Ser	Lys 320
,	Xaa	Leu	Lev	Glv												

<210> 541

<211> 204

<212> PRT

<213> Homo sapiens

<400> 541

494

Arg Gly Pro Thr Phe Thr Pro Glu Ile Met Ala Ala Glu Asp Val Val
1 5 10 15

Ala Thr Gly Ala Asp Pro Ser Asp Leu Glu Ser Gly Gly Leu Leu His
20 25 30

Glu Ile Phe Thr Ser Pro Leu Asn Leu Leu Leu Gly Leu Cys Ile 35 40 45

Phe Leu Leu Tyr Lys Ile Val Arg Gly Asp Gln Pro Ala Ala Ser Gly 50 55 60

Asp Ser Asp Asp Asp Glu Pro Pro Pro Leu Pro Arg Leu Lys Arg Arg 65 70 75 80

Asp Phe Thr Pro Ala Glu Leu Arg Arg Phe Asp Gly Val Gln Asp Pro 85 90 95

Arg Ile Leu Met Ala Ile Asn Gly Lys Val Phe Asp Val Thr Lys Gly
100 105 110

Arg Lys Phe Tyr Gly Pro Glu Gly Pro Tyr Gly Val Phe Ala Gly Arg 115 120 125

Asp Ala Ser Arg Gly Leu Ala Thr Phe Cys Leu Asp Lys Glu Ala Leu 130 135 140

Lys Asp Glu Tyr Asp Asp Leu Ser Asp Leu Thr Ala Ala Gln Gln Glu 145 150 155 160

Thr Leu Ser Asp Trp Glu Ser Gln Phe Thr Phe Lys Tyr His His Val 165 170 175

Gly Lys Leu Leu Lys Glu Gly Glu Glu Pro Thr Val Tyr Ser Asp Glu 180 185 190

Glu Glu Pro Lys Asp Glu Ser Ala Arg Lys Asn Asp 195 200

<210> 542

<211> 193

<212> PRT

<213> Homo sapiens

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<222> (183)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 542

Pro Ala Tyr Ser Leu Gly Leu Leu Lys Ser Val Leu Asp Gly Gly Gly 1 5 10 15

Ala Gly Ala His Gln Ala Arg Ser Asn Pro Ser Cys Met Tyr Pro Gln

Gly Thr Phe Val Ile Pro Leu Leu Val Thr Ala His Arg Asp Pro Thr 35 40 45

Gln Phe Lys Asp Pro Asp Cys Phe Asn Pro Thr Asn Phe Leu Asp Lys
50 60

Gly Lys Phe Gln Gly Asn Asp Ala Phe Met Pro Phe Ala Ser Gly Ala 65 70 75 80

Gly Arg Gly Gly Arg Gly Pro Ala Trp Thr Gly Ser Gly Val Pro Gly
85 90 95

Ala His Cys Ala Pro Val Tyr Pro Ala Lys Gln Met Cys Leu Gly Thr 100 105 110

Gly Leu Ala His Ser Gly Ile Phe Leu Phe Leu Thr Ala Thr Leu Gln 115 120 125

Arg Phe Cys Leu Leu Pro Val Val Arg Pro Gly Thr Ile Asn Leu Thr 130 135 140

Cys Ser Ala Leu Ala Trp Ala Val Ser Pro Gln Thr Ser Ser Ser Ser 145 150 155 160

Gln Trp Pro Ala Glu Val Arg Leu His Tyr Gly Gly Leu Thr Gly Pro 165 . 170 175

Gln Thr Ser Ile Pro Ser Xaa Val Asn Lys Gly Pro Lys Leu Gln Lys 180 185 190

Lys

<210> 543

<211> 352

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WO 00/55173

PCT/US00/05881

496

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497

Gln Gly Phe Thr Glu Phe Thr Ile Glu Asp Phe His Asn Thr Phe Met Asp Leu Ile Glu Gln Val Glu Lys Gln Thr Ser Val Ala Asp Leu Leu 225 230 235 Ala Ser Phe Asn Asp Gln Ser Thr Ser Asp Tyr Leu Val Val Tyr Leu 245 250 Arg Leu Leu Thr Ser Gly Tyr Leu Gln Arg Glu Ser Lys Phe Phe Glu 265 His Phe Ile Glu Gly Gly Arg Thr Val Lys Glu Phe Cys Gln Glu 280 Val Glu Pro Met Cys Lys Glu Ser Asp His Ile His Ile Ile Ala Leu Ala Gln Ala Leu Ser Val Ser Ile Gln Val Glu Tyr Met Asp Arg Gly 305 310 315 Glu Gly Gly Thr Thr Asn Pro His Ile Phe Pro Glu Gly Ser Glu Pro 325 330 Lys Val Tyr Leu Leu Tyr Arg Pro Gly His Tyr Asp Ile Leu Tyr Lys 345

<210> 544

<211> 240

<212> PRT

<213> Homo sapiens

<400> 544

Ser Thr His Ala Ser Glu Met Ala Glu Arg Gly Tyr Ser Phe Ser Leu

1 5 10 15

Thr Thr Phe Ser Pro Ser Gly Lys Leu Val Gln Ile Glu Tyr Ala Leu 20 25 30

Ala Ala Val Ala Gly Gly Ala Pro Ser Val Gly Ile Lys Ala Ala Asn $35 \hspace{1.5cm} 40 \hspace{1.5cm} 45$

Gly Val Val Leu Ala Thr Glu Lys Lys Gln Lys Ser Ile Leu Tyr Asp
50 55 60

Glu Arg Ser Val His Lys Val Glu Pro Ile Thr Lys His Ile Gly Leu

498

65					70					75					80
Val	Tyr	Ser	Gly	Met 85	Gly	Pro	Asp	Tyr	Arg 90	Val	Leu	Val	His	Arg 95	Ala
Arg	Lys	Leu	Ala 100	Gln	Gln	Tyr	Tyr	Leu 105	Val	туг	Gln	Glu	Pro 110	Ile	Pro
Thr	Ala	Gln 115	Leu	Val	Gln	Arg	Val 120	Ala	Ser	Val	Met	Gln 125	Glu	Tyr	Thr
Gln	Ser 130	Gly	Gly	Val	Arg	Pro 135	Phe	Gly	Val	Ser	Leu 140	Leu	Ile	Cys	Gly
Trp 145	Asn	Glu	Gly	Arg	Pro 150	Tyr	Leu	Phe	Gln	Ser 155	Asp	Pro	Ser	Gly	Ala 160
Tyr	Phe	Ala	Trp	Lys 165	Ala	Thr	Ala	Met	Gly 170	Lys	Asn	туr	Val	Asn 175	Gly
Lys	Thr	Phe	Leu 180	Glu	Lys	Arg	Tyr	Asn 185	Glu	Asp	Leu	Glu	Leu 190	Glu	Asp
Ala	Ile	His 195	Thr	Ala	Ile	Leu	Thr 200	Leu	Lys	Glu	Ser	Phe 205	Glu	Gly	Gln
Met	Thr 210	Glu	Asp	Asn	Ile	Glu 215	Val	Gly	Ile	Cys	Asn 220	Glu	Ala	Gly	Phe
Arg 225	Arg	Leu	Thr	Pro	Thr 230	Glu	Val	Lys	Asp	Туг 235	Leu	Ala	Ala	Ile	Ala 240

<210> 545

<211> 181

<212> PRT

<213> Homo sapiens

<400> 545

Arg Cys Ile Leu Tyr Thr Gly Phe Met Leu Gly Ala Gln Arg Glu Val 1 5 10 15

Asp Ser Arg Leu Leu Ala Leu Pro Gly Arg Lys Val Pro Thr Ser Trp $20 \hspace{1cm} 25 \hspace{1cm} 30$

Trp Asp Asp Leu Phe Lys Gly Ala Lys Glu His Gly Ala Val Ala Val 35 40 45

499

Glu Arg Val Thr Lys Ser Pro Gly Glu Thr Ser Lys Pro Arg Pro Phe 50 55 Ala Gly Gly Gly Tyr Arg Leu Gly Ala Ala Pro Glu Glu Glu Ser Ala Tyr Val Ala Gly Glu Lys Arg Gln His Ser Ser Gln Asp Val His Val 90 Val Leu Lys Leu Trp Lys Ser Gly Phe Ser Leu Asp Asn Gly Glu Leu 100 105 Arg Ser Tyr Gln Asp Pro Ser Asn Ala Gln Phe Leu Glu Ser Ile Arg 120 Arg Gly Glu Val Pro Ala Glu Leu Arg Arg Leu Ala His Gly Gly Gln 135 Val Asn Leu Asp Met Glu Asp His Arg Asp Glu Asp Phe Val Lys Pro 150 155 Lys Gly Ala Phe Lys Ala Phe Thr Gly Glu Gly Gln Lys Leu Gly Ser 170 Thr Ala Pro Arg Cys 180 <210> 546 <211> 197 <212> PRT <213> Homo sapiens <400> 546 Pro Arg Val Arg Arg Ala Arg Ala Ala Ala Gly Ser Ser His Ala 10 Ala Met Ala Asp Ser Glu Leu Gln Leu Val Glu Gln Arg Ile Arg Ser Phe Pro Asp Phe Pro Thr Pro Gly Val Val Phe Arg Asp Ile Ser Pro Val Leu Lys Asp Pro Ala Ser Phe Arg Ala Ala Ile Gly Leu Leu Ala

Arg His Leu Lys Ala Thr His Gly Gly Arg Ile Asp Tyr Ile Ala Gly

75

500

Leu Asp Ser Arg Gly Phe Leu Phe Gly Pro Ser Leu Ala Gln Glu Leu 85 90 Gly Leu Gly Cys Val Leu Ile Arg Lys Arg Gly Lys Leu Pro Gly Pro 100 105 Thr Leu Trp Ala Ser Tyr Ser Leu Glu Tyr Gly Lys Ala Glu Leu Glu 120 Ile Gln Lys Asp Ala Leu Glu Pro Gly Gln Arg Val Val Val Asp 135 Asp Leu Leu Ala Thr Gly Gly Thr Met Asn Ala Ala Cys Glu Leu Leu Gly Arg Leu Gln Ala Glu Val Leu Glu Cys Val Ser Leu Val Glu Leu 170 Thr Ser Leu Lys Gly Arg Glu Lys Leu Ala Pro Val Pro Phe Phe Ser 180 185 Leu Leu Gln Tyr Glu 195 <210> 547 <211> 93 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (84) <223> Xaa equals any of the naturally occurring L-amino acids <400> 547 Glu Thr Gly Lys Glu Ser Lys Ala Leu Phe Leu Pro Phe Pro Gly Ser 10 Val Tyr Ser Thr Ser Thr Gly Glu Ala Ser Gly Glu Gly Leu Ser Pro Leu Pro His Leu His Glu Phe Trp Asn Ser Val Leu Leu Ala Ala Cys 40 Phe Gln Leu Pro Pro Ile Ser Ile Ala Ala Gly Ser Ser Cys Leu Phe 55 Tyr Ser Val Ile Lys His Pro Ala Pro Thr Leu Ser Gln Arg Ser Ile

65

70